SANSUI

SERVICE MANUAL

D-X501

STEREO CASSETTE DECK

NOTE
D-X501 is additional model which external appearances are different from those of D-505. This manual contains PACKING LIST, ACCESSORY LIST PARTS LOCATION & PARTS LIST(F-5330), EXPLODED VIEW OF MECHANISM ASS'Y & PARTS LIST and OTHER PARTS. For servicing, refer to this manual togther with D-505 Service Manual previously issued.

CAUTION
1.Parts identified by the ⚠ symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
2.Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

NOTE :
1.The symbols, EU,UK,SS and XX <EXPORT> on the parts list mean followings respectively.

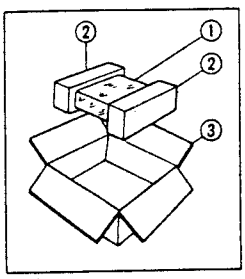
EU...Manufactured for European market
SS...Manufactured for Saudi Arabia market
UK...Manufactured for United Kingdom market
XX <EXPORT>....Standard Version
NON MARK.....Common Parts

2.On the parts list, the different parts are specified by "#" mark.

1. PACKING LIST

Parts List

Parts No.	Stock No.	Description
1	47859100	Vinyl Bag
# 2	27130110	Styrofoam Packing
# 3	27488500	Carton Case



2. ACCESSORY LIST

Parts List

Parts No.	Stock No.	Description
	07193400	PJP Coad
	or 38103300	PJP Cord
#	49033200	D-X701/X501 Operating Instruction (*E•F•S)
#	49033300	D-X701/X501 Operating Instruction (*G•I•Su)

*NOTE :
E•F•S ; English,French and Spanish Version
G•I•Sw; German,Italian and Swedish Version

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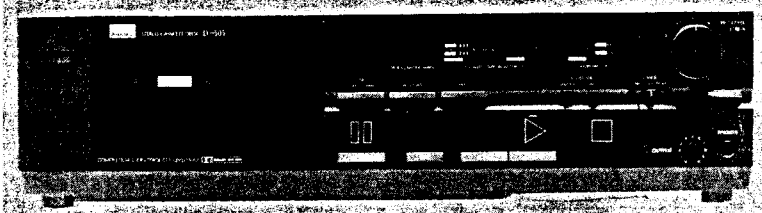
STEREO CASSETTE DECK

SANSUI D-505



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Sansui

SANSUI ELECTRIC CO., LTD.

•SPECIFICATIONS

Track format..... 4-track/2-channel system
Tape speed..... 4.8 cm/sec.
Heads (2-head configuration)
Rec/pb head..... HIGH-Bs hard permalloy
Erase head..... Double-gap HIGH-Bs ferrite
Motor..... Capstan: Electronically Controlled DC Motor
Reels: DC Motor
Wow/flutter..... 0.045% max (WRMS)
Fast forwarding (rewinding) time
..... Approx. 85 sec. (for C-60 tape)
Frequency response (—20 VU recording/playback)
Normal tape (LH)..... 20 to 17,000 Hz (30 to 16,000 Hz ±3 dB)
Chrome tape..... 20 to 18,000 Hz (30 to 17,000 Hz ±3 dB)
Metal tape..... 20 to 19,000 Hz (30 to 18,000 Hz ±3 dB)
Signal-to-noise ratio (recording/playback with metal tape)
DOLBY NR OFF..... Better than 58 dB
DOLBY-B NR ON..... Better than 66 dB (above 5 kHz)
DOLBY-C NR ON..... Better than 72 dB (above 1 kHz)
Erasure rate (metal tape)
..... More than 70 dB at 1 kHz
Recording bias frequency
..... 105 kHz
Input sensitivity/Impedance
LINE IN (REC)..... 70 mV/47 kohms
Power requiremets..... 120/220/240V, 50/60 Hz
For U.S.A. and Canada
..... 120V (60 Hz)
Power consumption..... 20 watts
Dimensions..... 430 mm (16-15/16") W
111 mm (4-3/8") H
310 mm (12-1/4") D
Weight..... 4.8 kg (10.6 lbs) net
6.1 kg (13.4 lbs) packed

* Design and specifications subject to changes without notice for improvements.
* Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double D symbol are trade marks of Dolby Laboratories Licensing Corporation.

CAUTION

1. The symbols, UL, CSA, SA, BS, UK, EU, AS and XX on the parts list and the schematic diagram mean followings respectively.

   UL..... Manufactured for U.S.A market.
   (Underwriters Laboratories approved model.)
   CSA..... Manufactured for Canadian market.
   SA..... Manufactured for South African market.
   BS, UK ..... Manufactured for United Kingdom market.
   EU ..... Manufactured for European market.
   AS..... Manufactured for Australian market.
   XX..... Standard Version.
   NON MARK ..... Common Parts.

2. Some printed circuit boards are not supplied as the assembled. To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.

3. Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.

4. Abbreviations in this service manual are as follows.

•Abbreviations List

C.R.	: Carbon Resistor	E.B.L.	: Low Leak Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor	Ta.C.	: Tantalum Capacitor
Ce.R.	: Cement Resistor	F.C.	: Film Capacitor
M.R.	: Metal Film Resistor	M.P.	: Metalized Paper Capacitor
F.R.	: Fusing Resistor	P.C.	: Polystyrene Capacitor
N.I.R.	: Non-Inflammable Resistor	G.C.	: Gimmic Capacitor
A.R.	: Array Resistor	A.C.	: Array Capacitor
C.C.	: Ceramic Capacitor	V.R.	: Variable Resistor
C.T.	: Ceramic Capacitor, Temperature Compensation	S.V.R.	: Semi Variable Resistor
E.C.	: Electrolytic Capacitor	SW.	: Switch
E.L.	: Low Leak Electrolytic Capacitor	Chip R.	: Chip Resistor
E.B.	: Bi-Polar Electrolytic Capacitor	Chip C.	: Chip Capacitor

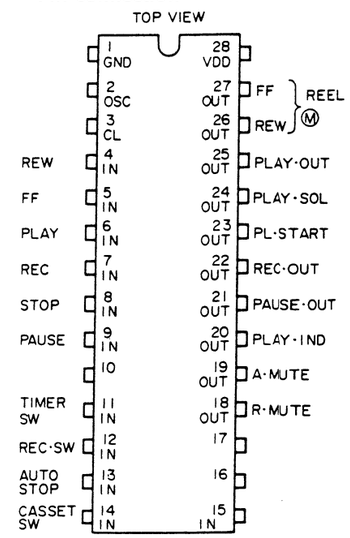
2. MODE OPERATION & TIMING CHART OF IC TC9310N-050

•Mode Operation of IC TC9310N-050

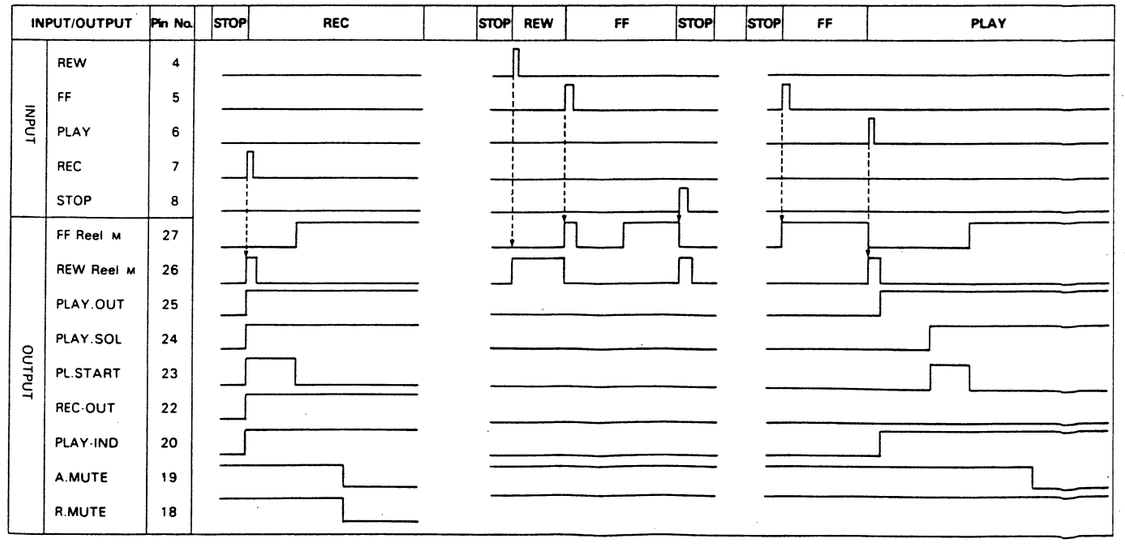
INPUT KEY / PRESENT MODE	STOP	PLAY	F.F	REW	REC	PAUSE	AUTO STOP
STOP	–	PLAY	F.F	REW	REC (–)	PAUSE	
PLAY	STOP	–	CUE	REVIEW	–	PLAY.PAUSE	STOP
F.F	STOP	PLAY	–	REW	–	–	STOP
REW	STOP	PLAY	F.F	–	–	–	STOP
CUE	STOP	PLAY	–	REW	–	–	STOP
REVIEW	STOP	PLAY	F.F	–	–	–	STOP
REC	STOP	–	F.F	REW	–	REC.PAUSE	STOP
PAUSE	STOP	PLAY.PAUSE	F.F	REW	REC.PAUSE (–)	STOP	
PLAY.PAUSE	STOP	–	F.F	REW	REC.PAUSE (–)	PLAY	
REC.PAUSE	STOP	–	F.F	REW	–	REC	

•**Note**: 1. This table shows operation when one input key is depressed on present mode.
2. Que is in the state of PLAY mode under FF operation.
Review is in the state of PLAY mode under REW operation.
— mark means continuing present mode.
/ mark means non relation with other input ports.

•Pin-connection

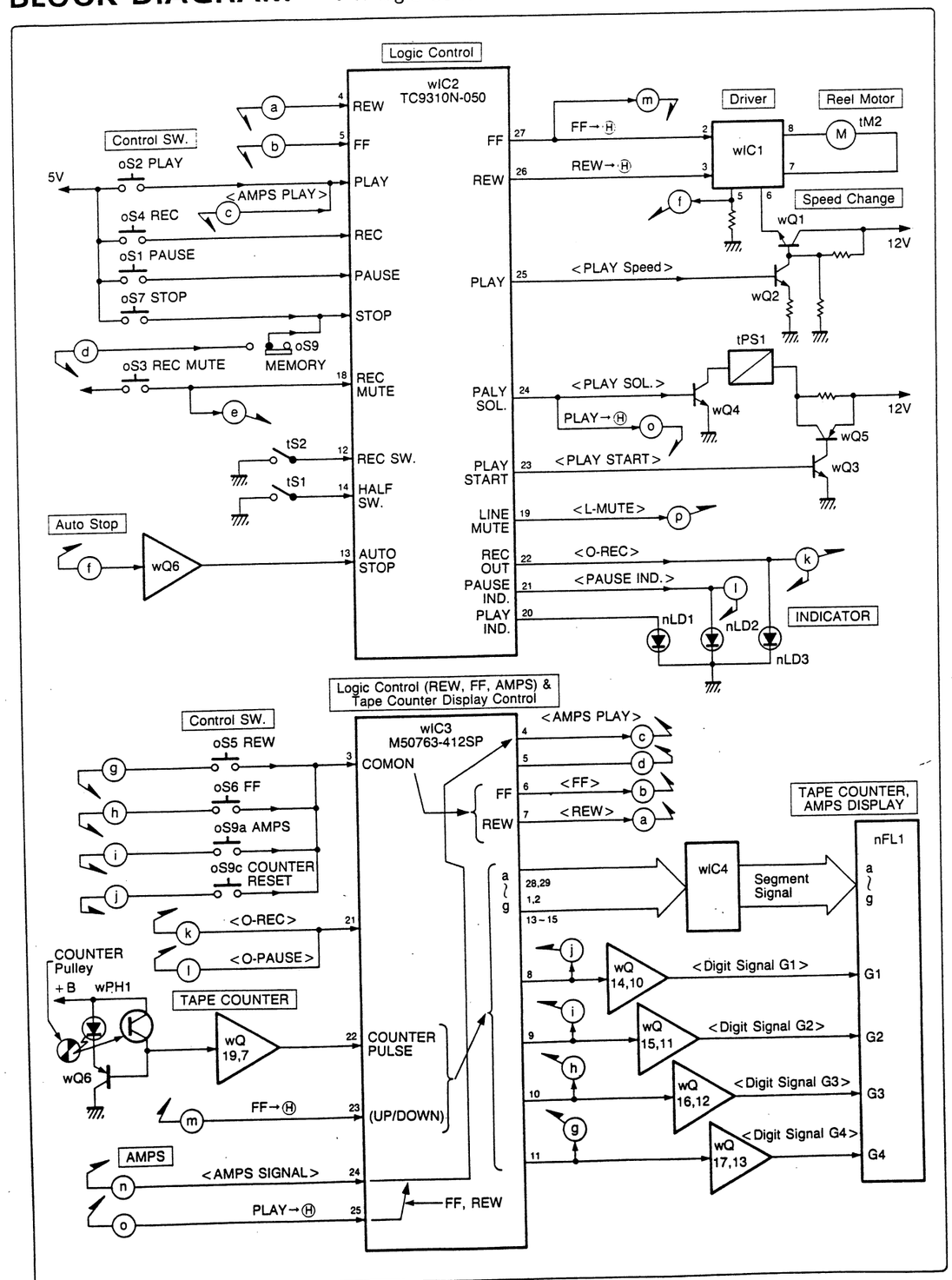


•Microcomputer Timing Chart (REC, REW→FF→STOP, FF→PLAY)

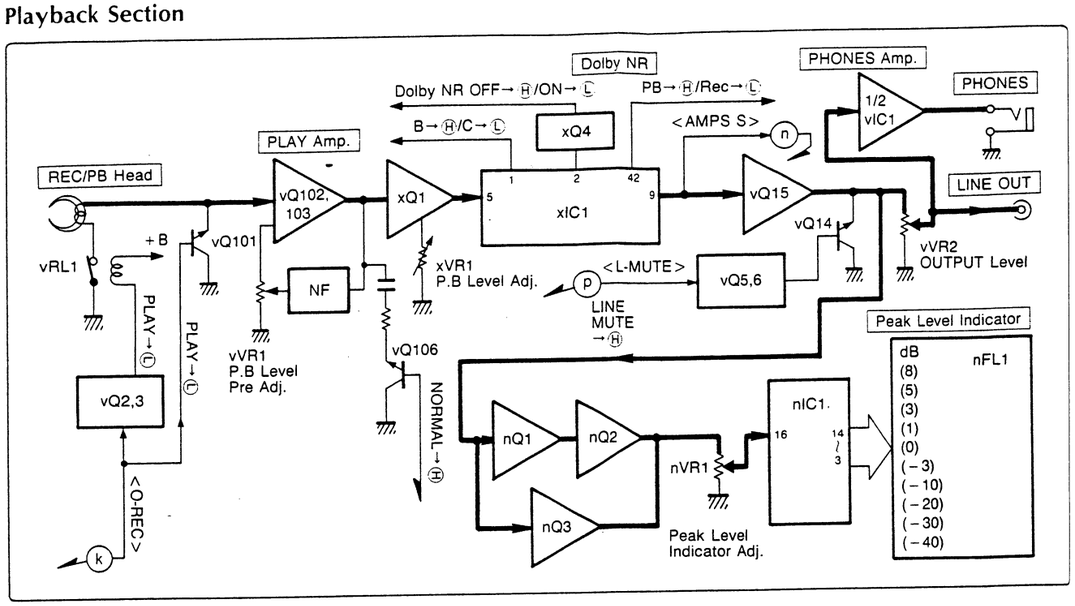


1. BLOCK DIAGRAM

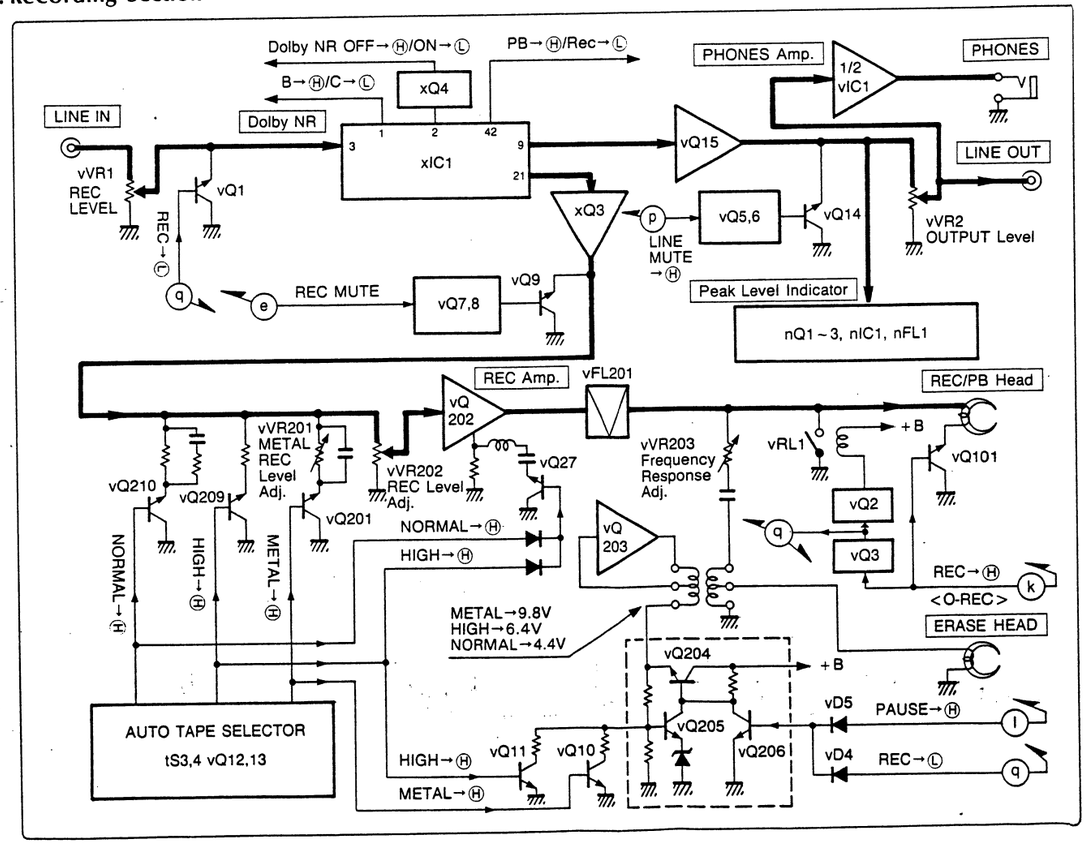
1-1. Logic Control Section



1-2. Playback Section



1-3. Recording Section



3. PARTS LOCATION & PARTS LIST (F-5330 Parts List only)

3-1. F-5330 Logic Control Board (Stock No. 00968201)

Parts List

Parts No.	Stock No.	Description
•Transistor		
mQ1	03085201	2SD438
mQ2	03085201	2SD438
•IC		
⚠mIC1	48470100	µPC78M12H
⚠mIC2	46144600	NJM78M12A
⚠	or 48470100	µPC78M12H
⚠mIC3	46144200	NJM78M05A
⚠	or 07183500	µPC78M05H
•Diode		
⚠mD1	03117000	RB152-LFF
mD2	03117600	1S2473T77
mD3	03117600	1S2473T77
⚠mD4	03117700	10E-2
•Zener Diode		
mDZ1	46116000	05Z24-Y
mDZ2	46115100	05Z18-Y
mDZ3	46111800	05Z6.2-Y
mC4	46168700	3300µF 35V E.C.
mC6	08405100	470µF 50V E.C.
•Transistor		
nQ1	46367101	2SC2603
nQ2	46367101	2SC2603
nQ3	46367101	2SC2603
•Diode		
nD1	03117600	1S2473T77
nD2	03117600	1S2473T77
nVR1	48199900	100kΩ (B) S.V.R., Level Indicator adj.
oJ1	46371500	4P Terminal, LINE IN, LINE OUT
•Transistor		
vQ1~4	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ5	46719900	DTC124ES
vQ6	46719800	DTA124ES
vQ7	46719800	DTA124ES
vQ8	46719900	DTC124ES
vQ9	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ10	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ11	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ12	46367001	2SA1115
	or 46392001	2SA1175
vQ13	46367001	2SA1115
	or 46392001	2SA1175
vQ14	46367001	2SA1115
	or 46392001	2SA1175
vQ15	46367101	2SC2603
	or 48058801	2SC1740S
vQ207	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
IC		
vIC1	46673800	M5218P

Parts No.	Stock No.	Description
•Diode		
vD1	03117600	1S2473T77
vD2	03117600	1S2473T77
vD3	03117600	1S2473T77
vD4	03117600	1S2473T77
vD5	03111600	1S2473
•Zener Diode		
vDZ1	46112700	05Z8.2-Y
vDZ2	46112700	05Z8.2-Y
vDZ3	46112700	05Z8.2-Y
vR4	46681300	10Ω 1/4W F.R.
•Transistor		
wQ1	46614101	2SC3243
wQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ3	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ4	46359801	2SC2001
	or 46614101	2SC3243
	or 48055901	2SD1468S
wQ5	46359701	2SA952
	or 46614001	2SA1283
wQ6	46367001	2SA1115
wQ7	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ8	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ9	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ10~13	46367001	2SA1115
wQ14	46719900	DTC124ES
wQ15	46719900	DTC124ES
wQ16	46719900	DTC124ES
wQ17	46719900	DTC124ES
wQ18	46367101	2SC2603
	or 48058801	2SC1740S
wQ19	46367001	2SA1115
	or 46392001	2SA1175
•IC		
wIC1	46948000	TC9310N-050
wIC2	46149600	BA6208
wIC3	48370300	M50763-412SP
wIC4	46671500	LB1291
wXO1	46396200	Ceramic Element CSB400P
•Diode		
wD1	03117600	1S2473T77
wD2	03117600	1S2473T77
# wD5	46442400	OA90M
wD6	03117600	1S2473T77
wD7	03117600	1S2473T77
wD8	03117600	1S2473T77
wD15	03117600	1S2473T77
wD16	03117600	1S2473T77
wR51	46348900	4.7kΩX8 1/8W A.R.
# wR52	48773200	4.7kΩX8 A.R.
wC2	46695400	0.012µF 50V F.C.

4. EXPLODED VIEW OF MECHANISM ASS'Y & PARTS LIST

* For exploded view of mechanism ass'y, refer to D-505 Service Manual.

Parts List

Parts No.	Stock No.	Description
1	46267900	Tapping Screw, M3.0X8
2	47644500	Spring, eject
3	47420900	Plastic Tack
4	47281810	Pinch Roller Ass'y
5	47405500	Spring, pinch roller
6	47406200	Spring, head base
7	47405600	Spring, slide base
8	47668600	Spring, plunger solenoid
9	47404700	Washer, d = 2.5
10	47839400	Spring, half
11	47709620	Spring, reel
12	18139300	Tapping Screw, M2X12
13	47404900	Steel Ball, ϕ2.0
14	47405000	Arm Ass'y
15	27083100	Washer, d = 1.6
16	47497100	Washer, d = 2.0
17	47835510	Reel Gear Ass'y
18	47723020	Sensor Arm (A)
19	47284110	Head Base
20	48369400	REC/PB Head
21	07997400	Erase
22	47406100	Spring, azimuth
23	00420900	Binding Head Screw, M2X12
24	———	Sub Chassis
25	47281210	Gear, flywheel ass'y
26	47530000	Spring A, flywheel
27	47405100	Belt
# 28	**27218900**	**Flywheel Ass'y**
29	47404600	Washer, d = 2.5
30	47283200	Pully
31	46737400	Capstan Motor
32	46737500	Reel Motor
33	47293110	Gear, reel motor
34	47903310	Lock Arm (A)
35	47293810	Arm (B)
# 36	**47283840**	**Assist Gear**
37	47292610	Plunger Solenoid
38	47292530	Sensor Arm B

5. OTHER PARTS

Parts List <Front View>

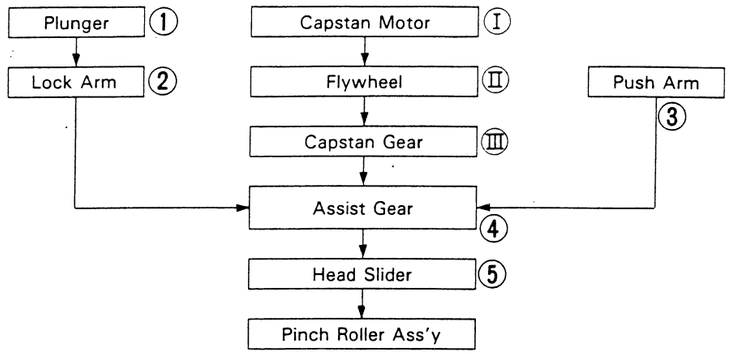
Parts No.	Stock No.	Description
# 1	**27488800**	**Lid Ass'y**
# 2	**27486700**	**Bonnet**
# 3	**27487800**	**Front Panel Ass'y**
3-1	27133300	Push Knob, FF
3-2	27133400	Push Knob, REW
# 3-3	**27488600**	**Push Knob, REC**
# 3-4	**27497300**	**Push Knob, REC MUTE**
# 3-5	**27141520**	**Cassette Holder Ass'y**
4	48369900	Push SW., AMPS, MEMORY, RESET
5	27150500	Push Knob, AMPS, MEMROY, RESET
6	48345600	FL. Display Tube
7	48315900	Push SW., DOLBY NR
8	27150400	Push Knob, DOLBY NR
9	46178400	Slide SW., TIMER REC/PLAY
10	27127700	Slide Knob, TIMER REC/PLAY
# 11	**27486300**	**Knob, REC LEVEL(L)**
# 12	**27486400**	**Knob, REC LEVEL(R)**
13	48493100	10kΩ V.R., REC LEVEL
⚠14	46413900	Push SW., POWER
15	27127600	Push Knob, POWER
16	46265700	Jack, PHONES
17	27128000	Knob, OUTPUT
18	48370200	10kΩ V.R., OUTPUT
19	48306900	Push SW., PAUSE, PLAY, REC, REC MUTE, REW, FF, STOP
20	48389900	LED Ass'y (SLF-401C)
# 21	**27487300**	**Dress Side Panel(R)**
# 22	**27487400**	**Dress Side Panel(L)**

Parts List <Top View>

Parts No.	Stock No.	Description
1	46371500	4P Terminal, LINE IN/OUT
⚠ 2	07204700	Slide SW., VOLTAGE SELECTOR (EU,UK)
⚠ 3	15024301	Power Transformer (XX, SS)
⚠	15024305	Power Transformer (EU,UK)
⚠ 4	38004700	Power Supply Cord (XX)
⚠	38004500	Power Supply Cord (EU)
#⚠	**48837700**	**Power Supply Cord(SS)**
⚠	38004300	Power Supply Cord (UK)
5	47157300	AC Cord Cover
# 6	**27489300**	**Side Panel Ass'y(R)**
7	47113110	Joint Shaft
# 8	**48367900**	**Damper Ass'y**
9	47628900	Damper Holder
10	47628500	Damper Joint Shaft
11	27159100	Counter Pulley Ass'y
12	47843300	Counter Belt
# 13	**27489200**	**Side Panel Ass'y(L)**

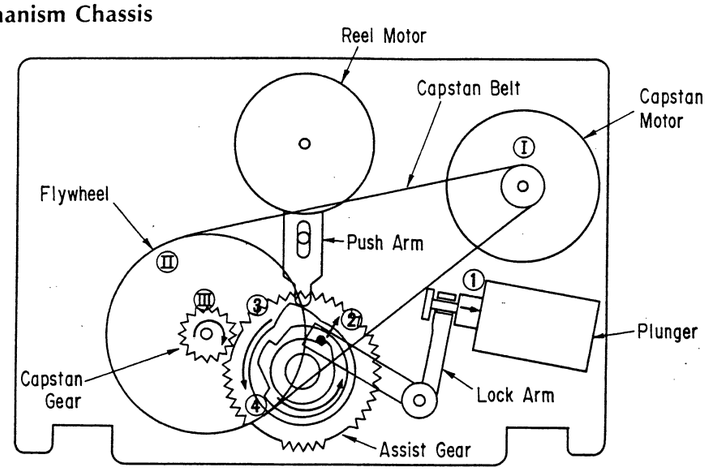
3. OPERATIONS OF PINCH ROLLER

3-1. Torque Transportation Flowchart

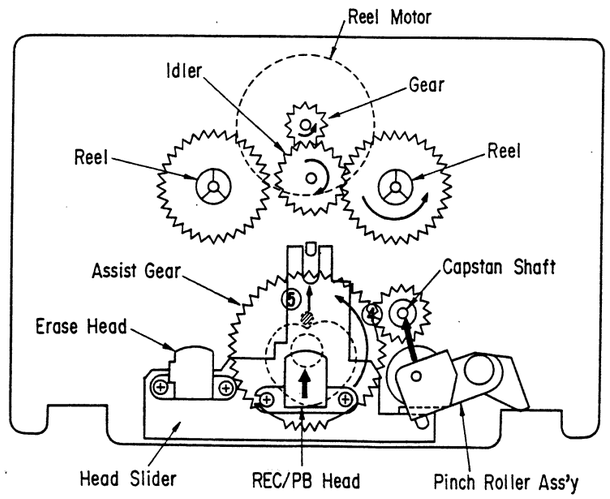


• The pinch roller is brought into pressure contact with the capstan shaft.

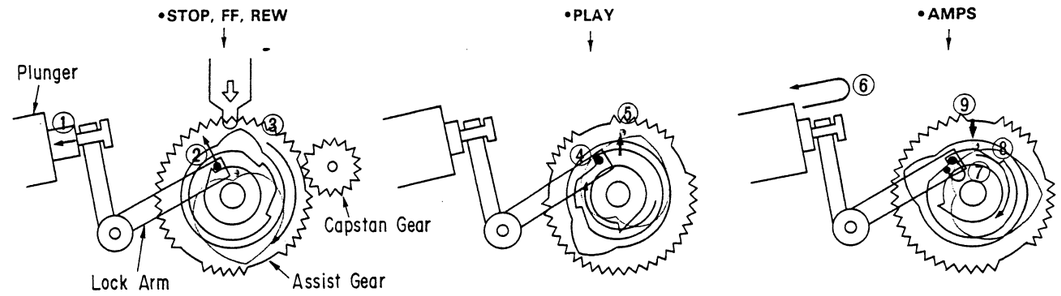
3-2. Rear View of Mechanism Chassis



3-3. Front View of Mechanism Chassis



3-4. Cam Positions in the Modes of PLAY, FF, REW & STOP



4. ADJUSTMENTS

4-1. Tape Speed Adjustment

Note: 1. Use Sansui Test Tape, SCT-S3K (3 kHz signal is recorded on the tape).
2. Connections are shown in Fig. 4-1.
3. Remove the cassette lid.
(Refer to removement of Lid Ass'y on Page 14)

Fig. 4-1

Fig. 4-2

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	Tape Speed Adj.	LINE OUT Frequency counter	Playback the TEST TAPE SCT-S3K	Turn semi-variable resistor as Fig. 4-2	3000Hz ± 45Hz	Use small screw driver

4-2. Playback Adjustment

Note: 1. Before this adjustment, clean REC/P.B. head surface.
2. For this adjustment, use Sansui Test Tape, SCT-F10K, and SCT-L400.
3. Set the Dolby NR switch to be OFF.
4. Connections are shown in Fig. 4-3.
5. Set the OUTPUT volume to be MAX position.

Fig. 4-3

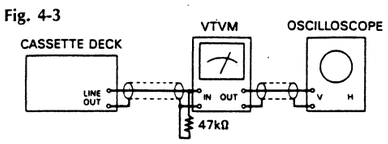
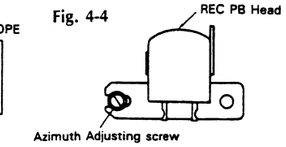


Fig. 4-4

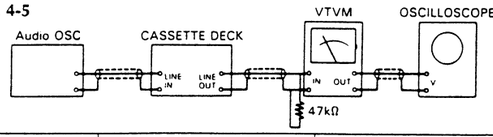


STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	REC/P.B. Head Adj.	LINE OUT VTVM and Scope	Playback the TEST TAPE SCT-F10K	Adjust the azimuth adjusting screw in Fig. 4-4.	MAX. Output both channels	Refer to removement of Lide ass'y on Page 14. After this adjustment, lock thesc rew with paint.
2.	Playback Level Pre Adj.	Between Point Ⓐ (Pin1, L-CH)/ Point Ⓑ (Pin6, R-CH) and Point Ⓒ (Pin5, GND) VTVM and Scope	Playback the TEST TAPE SCT-L400	Adjust each vVR101 (L-CH and R-CH, F-4678)	10mV ± 2dB	See Top View on Page 16.
3.	Playback Level Adj.	LINE OUT VTVM and Scope	Playback the TEST TAPE SCT-L400	Adjust each xVR1 (L-CH and R-ch, F-4960)	500mV ± 2dB	See Top View on Page 16.

3. REC Level & Frequency Response Adjustment

Note: 1. Connections are shown in Fig. 4-5.
2. Set the Dolby NR switch to be OFF.
3. Set the OUTPUT volume to be MAX position.
4. Set the REC LEVEL volume to be MAX position.

Fig. 4-5

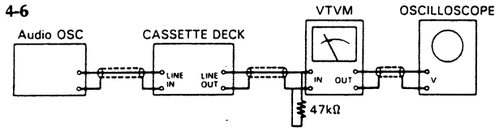


EP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	REC Level Adj.	Feed 1kHz from Audio S.G. into LINE IN.	LINE OUT, VTVM and Scope	Load the TEST TAPE SCT-SA. 1. Push the PAUSE, and REC knob. 2. Adjust the output level of Audio SG. for obtaining 200mV on VTVM. 3. Push the PAUSE knob, then record the 1kHz signal. 4. Playback the 1kHz signal. 5. Confirm that the output levels on both channels are 200mV ±2dB on VTVM.	1. If not turn vVR202 (REC, L-CH, F-4679) and vVR202 (REC, R-CH, F-4679) until output level 200mV ± 2dB on both channels are obtained.	vVR202 (REC, L-CH) and vVR202 (REC, R-CH) are shown in Top View on Page 16.
2.	Frequency Response Adj.	Feed 1kHz 10mV and 10kHz 10mV, from Audio S.G. into LINE IN.	Same as above	Load the TEST TAPE SCT-SA. 1. Record the 1kHz and 10kHz signals. 2. Playback the 1kHz and 10kHz signals, then confirm that both output levels equal.	1. If not, adjust vVR203 (F-4679) for L-CH and vVR203 (F-4679) for R-CH slightly until the output levels will be equal.	
3.	METAL REC Level Adj.	Feed 1kHz from Audio S.G. into LINE IN.	LINE OUT, VTVM and Scope	Load the TEST TAPE SCT-MA. 1. Push the PAUSE, and REC knob. 2. Adjust the output level of Audio SG. for obtaining 200mV on VTVM. 3. Push the PAUSE knob, then record the 1kHz signal. 4. Playback the 1kHz signal. 5. Confirm that the output levels on both channels are 200mV ±2dB on VTVM.	1. If not turn vVR201 (METAL, L-CH, F-4679) and vVR201 (METAL, R-CH, F-4679) until output level 200mV ± 2dB on both channels are obtained.	vVR201 (METAL, L-CH) and vVR201 (METAL, R-CH) are shown in Top View on page 16.

4. Peak Level Indicator Adjustment

Note: 1. Connections are shown in Fig. 4-6.
2. Set the OUTPUT volume to be MAX position.

Fig. 4-6



EP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
	Peak Level Indicator Adjustment	Feed 1kHz, 100mV from S.G. into LINE IN.	LINE OUT, VTVM and Scope	Load the TEST TAPE SCT-SA. 1. Push on PAUSE, and REC knob. 2. Adjust the REC LEVEL knob for obtaining 500mV on VTVM.	1. Light the 0dB point on level indicator to adjust nVR1 (F-5330). 2. Adjust the REC LEVEL knob for obtaining 490mV on VTVM, then confirm the 0dB point on level indicator go out. 3. If not, adjust nVR1, until SETTING 1 ~ ADJUSTMENT 2 will be obtain:	nVR1 are shown in Top View on Page 16.

ist of Sansui Test Tape

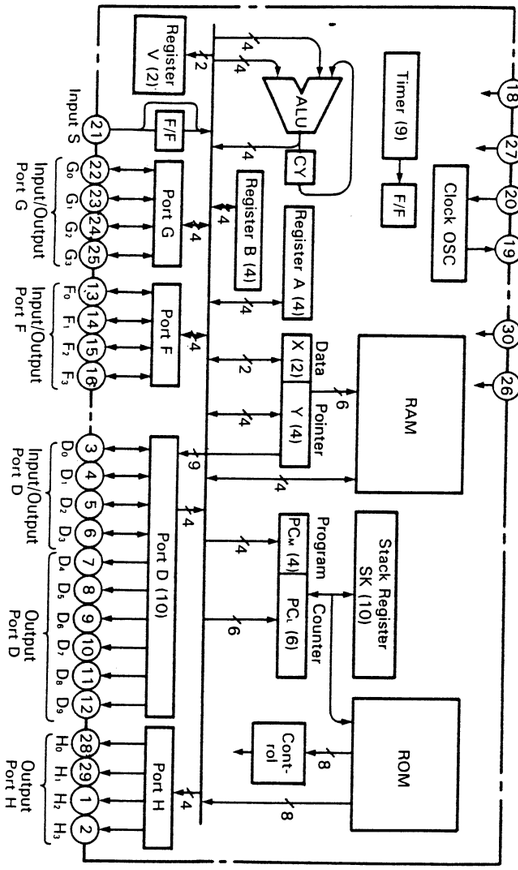
Name of TEST TAPE	Recorded Frequency	Description	Equivalent To
SCT-F40	40 Hz	Playback Frequency Response Check	–
SCT-F1K	1 kHz	High Frequency Equalization Check	–
SCT-F10K	10 kHz	REC/PB Head Adjustment	–
SCT-L400N	400 Hz	Playback Level and Indicator Level Adjustment	–
SCT-S3K	3 kHz	Speed Check and Wow & Flutter Check	–
*SCT-AD (NORMAL)	–	Recording Bias Adjustment	TDK AD
*SCT-SA (HIGH)	–	REC/PB Level Adjustment	TDK SA
*SCT-MA (METAL)	–	Frequency Response Check	TDK MA

•**Note:** Some reference tapes marked * are not supplied.
As these are equivalent to ones indicated above, please obtain these blank tapes on your side as possible.

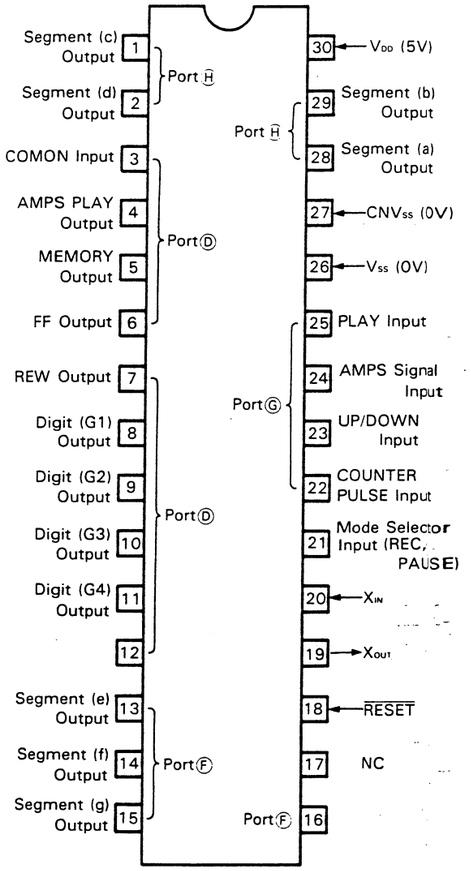
5. INTERIOR BLOCK DIAGRAM OF IC

•M50763-412SP (Microcomputer for TAPE COUNTER DISPLAY & AMPS)

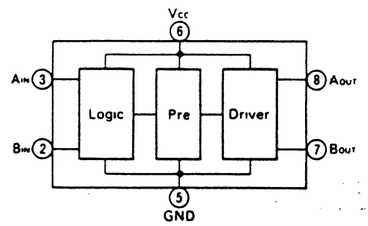
<Block>



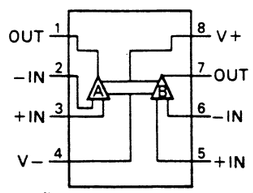
<Description of Terminals>



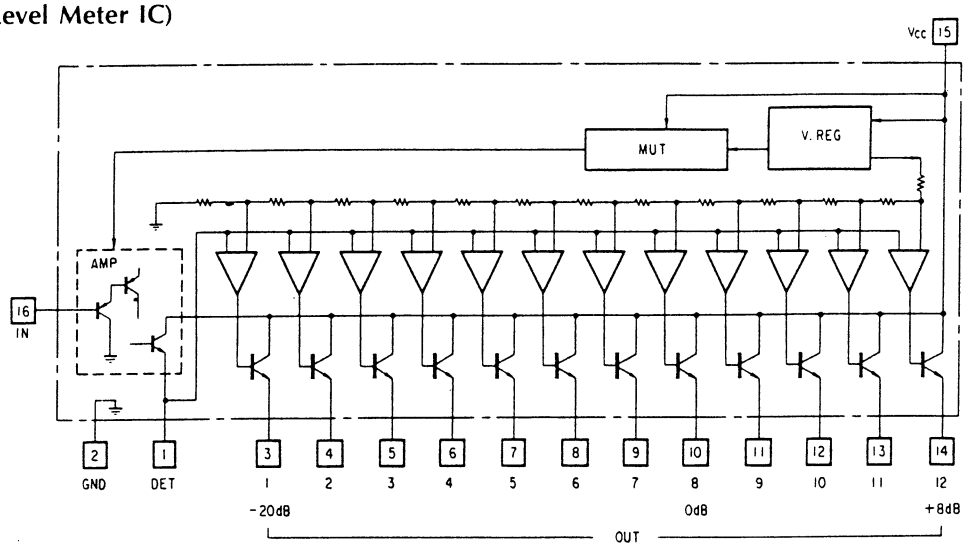
•BA6208 (Motor Drive IC)



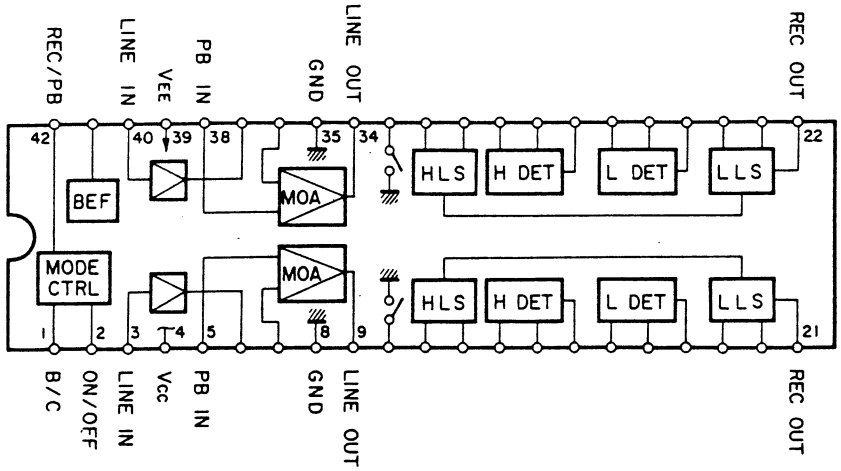
•M5218P (OP AMP. IC)



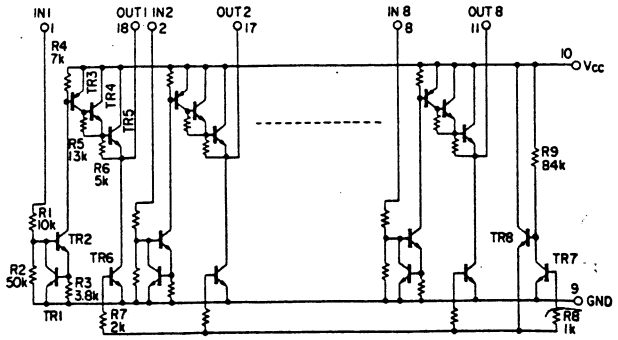
•BA6146 (Peak Level Meter IC)



•CX-20187 (Dolby Noise Reduction IC)



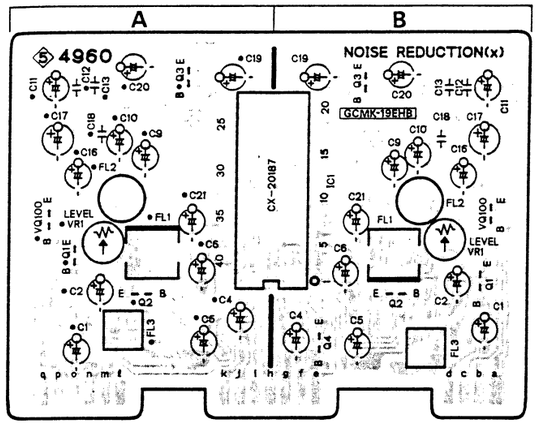
•LB1291 (FL. Display Driver IC)



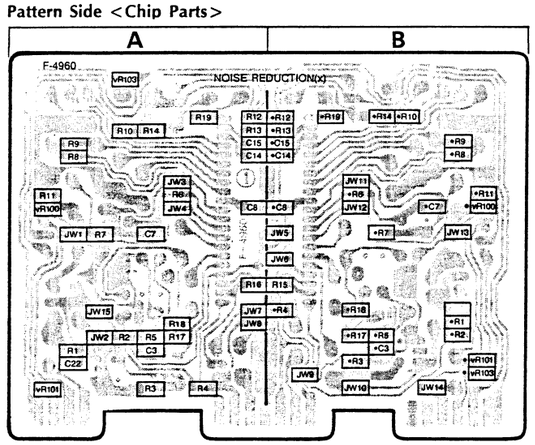
6. PARTS LOCATION & PARTS LIST

6-1. F-4960 Noise Reduction Board (Stock No. 00971601)

Component Side



Pattern Side <Chip Parts>



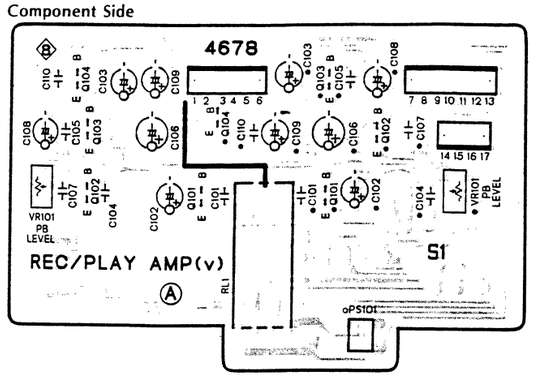
•**Note:** On this circuit board, the right channel is specified by "●" mark on top of the parts No.

Parts List

Parts No.	Stock No.	Description
•Transistor		
xQ1	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
xQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
xQ3	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
xQ4	46719900	DTC124ES
•IC		
xIC1	48179900	CX-20187
xJW1	46741100	Cross Conductor (Chip)
xJW3	46741100	Cross Conductor (Chip)
xJW4	46741100	Cross Conductor (Chip)
xJW5	46741100	Cross Conductor (Chip)
xJW6	46741100	Cross Conductor (Chip)
xJW7	46741100	Cross Conductor (Chip)
xJW8	46741100	Cross Conductor (Chip)
xJW9	46741100	Cross Conductor (Chip)
xJW11	46741100	Cross Conductor (Chip)
xJW12	46741100	Cross Conductor (Chip)
xJW13	46741100	Cross Conductor (Chip)
xJW14	46741100	Cross Conductor (Chip)
xJW15	46741100	Cross Conductor (Chip)
xR1	46753200	220kΩ 1/8W Chip R.
xR2	46748200	1.8kΩ 1/8W Chip R.
xR3	46749400	5.6kΩ 1/8W Chip R.
xR4	46749200	4.7kΩ 1/8W Chip R.
xR5	46754800	1MΩ 1/8W Chip R.
xR6	46746700	430Ω 1/8W Chip R.
xR7	46748500	2.4kΩ 1/8W Chip R.
xR8	46749300	5.1kΩ 1/8W Chip R.
xR9	46749600	6.8kΩ 1/8W Chip R.
xR10	46747200	680Ω 1/8W Chip R.
xR11	46751600	47kΩ 1/8W Chip R.
xR12	46748600	2.7kΩ 1/8W Chip R.
xR13	46747700	1.1kΩ 1/8W Chip R.
xR14	46754000	470kΩ 1/8W Chip R.
xR15	46752400	100kΩ 1/8W Chip R.
xR16	46750800	22kΩ 1/8W Chip R.
xR17	46749400	5.6kΩ 1/8W Chip R.
xR18	46748600	2.7kΩ 1/8W Chip R.
xR19	46745200	100Ω 1/8W Chip R.
xR100	46748600	2.7kΩ 1/8W Chip R.
xR101	46748400	2.2kΩ 1/8W Chip R.
xC3	46794800	2700pF 50V Chip C.
xC7	46779900	560pF 50V Chip C.
xC8	46795100	4700pF 50V Chip C.
xC14	46795300	6800pF 50V Chip C.
xC15	46795500	10000pF 50V Chip C.
xC22	46778100	100pF 50V Chip C.
xFL1	48363600	DOLBY Filter
xFL2	48193300	DOLBY Filter (SQ)
xFL3	48366300	Trap Filter
xVR1	46633700	1kΩ (B) S.V.R., P.B. Level adj.
	or 48199300	1kΩ (B) S.V.R., P.B. Level adj.

6-2. F-4678 Playback Amp. Board (Stock No. 00968801)

Component Side

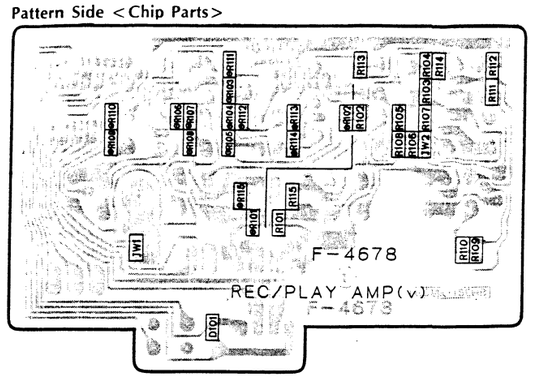


•**Note:** On this circuit board, the right channel is specified by "●" mark on top of the parts No.

Parts List

Parts No.	Stock No.	Description
•Transistor		
vQ101	46359801	2SC2001
	or 48055901	2SD1468S
vQ102	46577801	2SC2320L
	or 46581701	2SC1845
vQ103	46577801	2SC2320L
	or 46581701	2SC1845
	or 46947401	2SC2459
vQ104	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
•Diode		
vD101	46852000	RLS-73 (Chip)
vJW1	46741100	Cross Conductor (Chip)
vJW2	46741100	Cross Conductor (Chip)

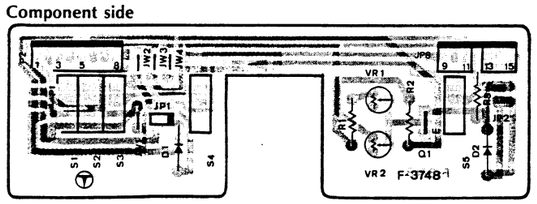
Pattern Side <Chip Parts>



Parts No.	Stock No.	Description
vR101	46742800	10Ω 1/8W Chip R.
vR102	46749200	4.7kΩ 1/8W Chip R.
vR103	46752800	150kΩ 1/8W Chip R.
vR104	46751600	47kΩ 1/8W Chip R.
vR105	46750400	15kΩ 1/8W Chip R.
vR106	46752800	150kΩ 1/8W Chip R.
vR107	46744000	33Ω 1/8W Chip R.
vR108	46747800	1.2kΩ 1/8W Chip R.
vR109	46746800	470Ω 1/8W Chip R.
vR110	46752600	120kΩ 1/8W Chip R.
vR111	46748600	2.7kΩ 1/8W Chip R.
vR112	46747600	1kΩ 1/8W Chip R.
vR113	46750000	10kΩ 1/8W Chip R.
vR114	46753200	220kΩ 1/8W Chip R.
vR115	46752400	100kΩ 1/8W Chip R.
vVR101	48078600	1kΩ S.V.R., P.B. Pre Level adj.
vRL1	11504700	Relay
	or 11504701	Relay LR2A-12B

6-3. F-3748 Tape Selector Board

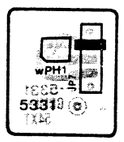
Component side



Parts No.	Stock No.	Description
•Diode		
tD1	03111600	1S2473
tS1	47292710	Leaf SW., half
tS2	47292710	Leaf SW., REC Prevention
tS3	47292710	Leaf SW., tape sel. HIGH
tS4	47292710	Leaf SW., tape sel. METAL

6-4. F-5331 Photo Coupler Board

Component Side

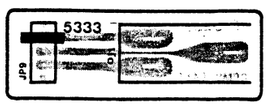


Parts List

Parts No.	Stock No.	Description
wPH1	48372500	Photo COUPLER GP2L04-B
	or 48372501	Photo COUPLER GP2L04-C

6-5. F-5333 Phone Jack Board

Component Side

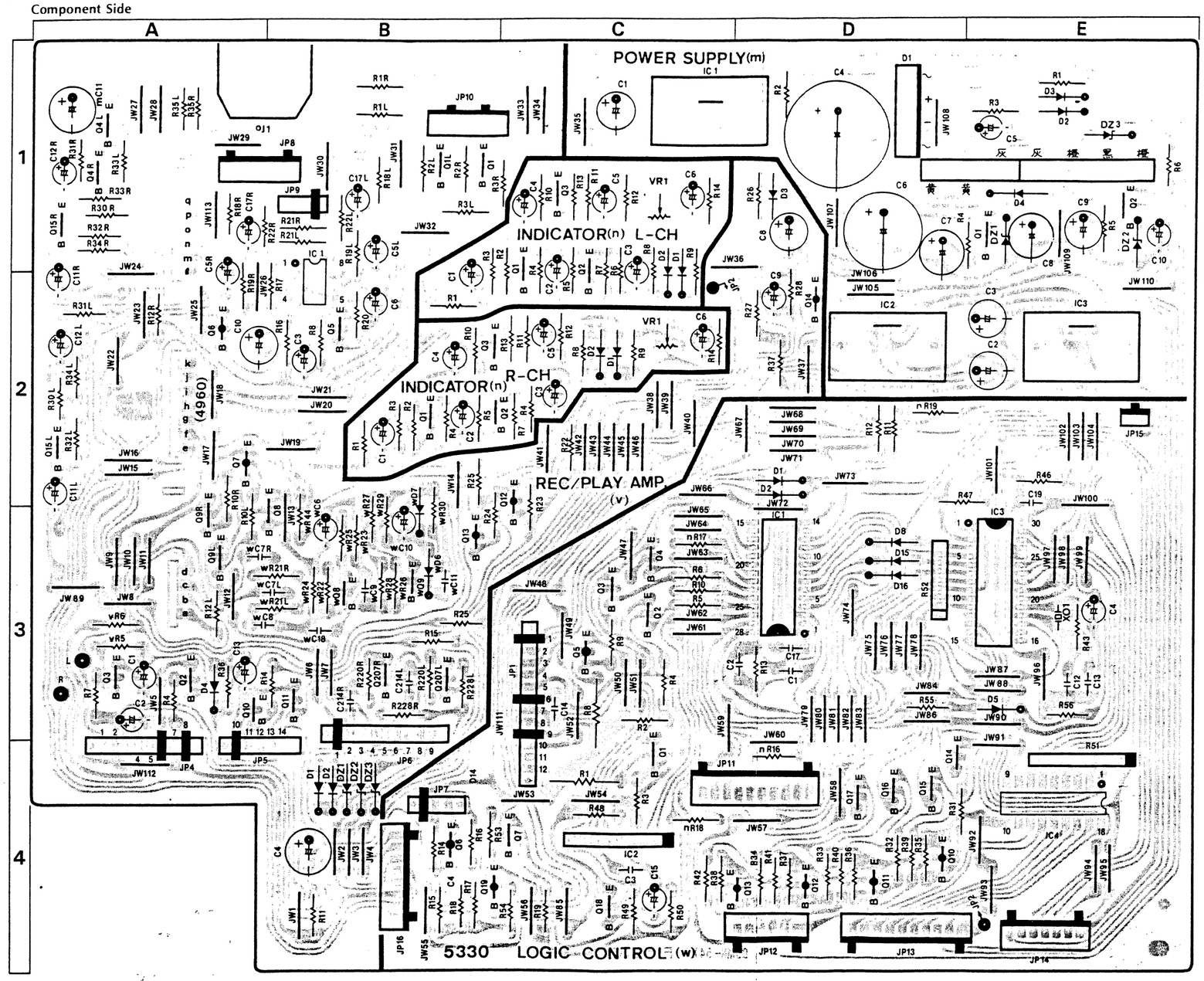


Parts List

Parts No.	Stock No.	Description
oJ2	46265700	Jack, PHONES

6-6. F-5330 Logic Control Board (Stock No. 00968201)

Component Side



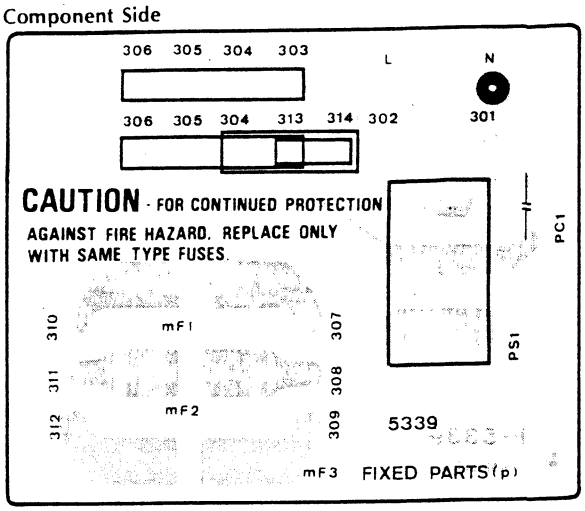
Parts List

Parts No.	Stock No.	Description
•Transistor		
mQ1	03085201	2SD438
mQ2	03085201	2SD438
•IC		
⚠mIC1	46144600	NJM78M12A
⚠mIC2	46144600	NJM78M12A
⚠mIC3	46144200	NJM78M05A
•Diode		
⚠mD1	03117000	RB152-LFF
mD2	03117600	1S2473T77
mD3	03117600	1S2473T77
⚠mD4	03117700	10E-2
•Zener Diode		
mDZ1	46116000	05Z24-Y
mDZ2	46115100	05Z18-Y
mDZ3	46111800	05Z6.2-Y
mC4	46168700	3300μF 35V E.C.
mC6	08405100	470μF 50V E.C.
•Transistor		
nQ1	46367101	2SC2603
nQ2	46367101	2SC2603
nQ3	46367101	2SC2603
•Diode		
nD1	03117600	1S2473T77
nD2	03117600	1S2473T77
nVR1	48199900	100kΩ (B) S.V.R., Level Indicator adj.
oJ1	46371500	4P Terminal, LINE IN, LINE OUT
•Transistor		
vQ1	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ3	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ4	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ5	46719900	DTC124ES
vQ6	46719800	DTA124ES
vQ7	46719800	DTA124ES
vQ8	46719900	DTC124ES
vQ9	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ10	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ11	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ12	46367001	2SA1115
	or 46392001	2SA1175
vQ13	46367001	2SA1115
	or 46392001	2SA1175
vQ14	46367001	2SA1115
	or 46392001	2SA1175
vQ15	46367101	2SC2603
	or 48058801	2SC1740S
vQ207	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
•IC		
vIC1	46673800	M5218P

Parts No.	Stock No.	Description
•Diode		
vD1	03117600	1S2473T77
vD2	03117600	1S2473T77
vD3	03117600	1S2473T77
vD4	03117600	1S2473T77
vD5	03111600	1S2473
•Zener Diode		
vDZ1	46112700	05Z8.2-Y
vDZ2	46112700	05Z8.2-Y
vDZ3	46112700	05Z8.2-Y
vR4	46681300	10Ω 1/4W F.R.
•Transistor		
wQ1	46614101	2SC3243
wQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ3	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ4	46359801	2SC2001
	or 46614101	2SC3243
	or 48055901	2SD1468S
wQ5	46359701	2SA952
	or 46614001	2SA1283
wQ6	46367001	2SA1115
wQ7	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ8	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ9	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ10	46367001	2SA1115
	or 46392001	2SA1175
wQ11	46367001	2SA1115
	or 46392001	2SA1175
wQ12	46367001	2SA1115
	or 46392001	2SA1175
wQ13	46367001	2SA1115
	or 46392001	2SA1175
wQ14	46719900	DTC124ES
wQ15	46719900	DTC124ES
wQ16	46719900	DTC124ES
wQ17	46719900	DTC124ES
wQ18	46367101	2SC2603
	or 48058801	2SC1740S
wQ19	46367001	2SA1115
	or 46392001	2SA1175
•IC		
wIC1	46948000	TC9310N-050
wIC2	46149600	BA6208
wIC3	48370300	M50763-412SP
wIC4	46671500	LB1291
wXO1	46396200	Ceramic Element CSB400P
•Diode		
wD1	03117600	1S2473T77
wD2	03117600	1S2473T77
wD5	46421600	OA90M
wD6	03117600	1S2473T77
wD7	03117600	1S2473T77
wD8	03117600	1S2473T77
wD15	03117600	1S2473T77
wD16	03117600	1S2473T77
wR51	46348900	4.7kΩX8 1/8W A.R.
wR52	48339900	4.7kΩX8 A.R.
wC2	46695400	0.012μF 50V F.C.

6-7. F-5339 Power SW. Board

Component Side

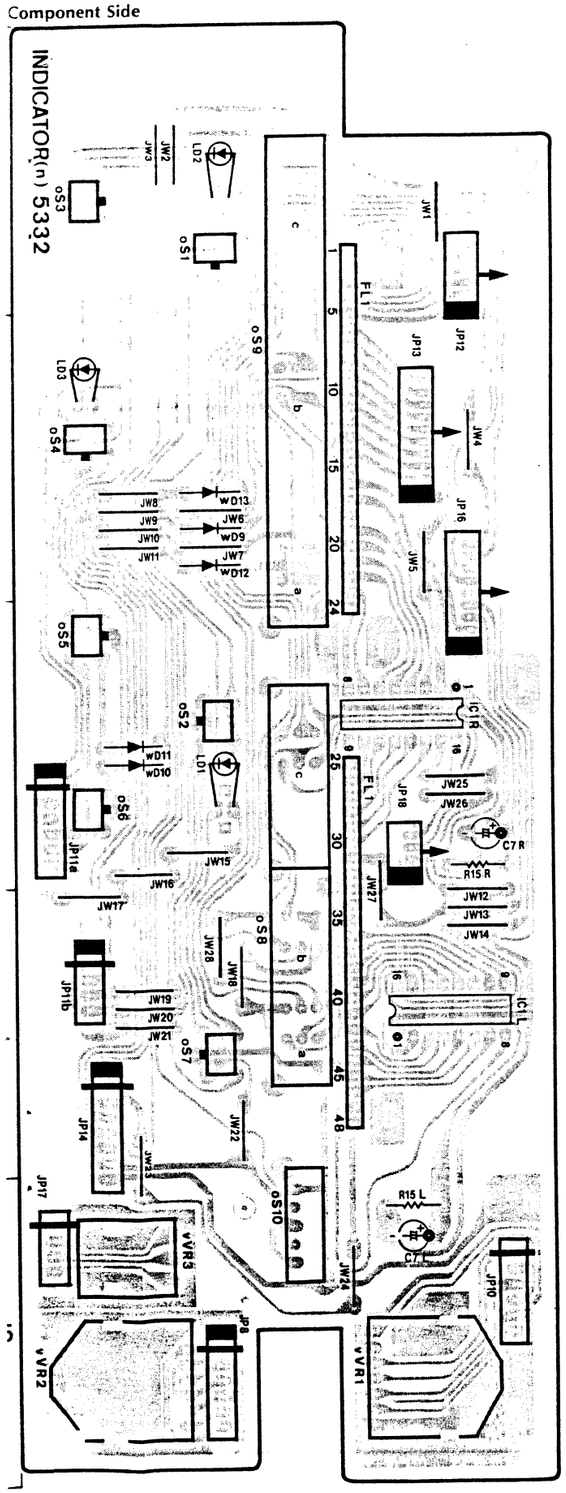


Parts List

Parts No.	Stock No.	Description
⚠pC1	46943200	0.01μF 400V C.C.
⚠pS1	46413900	Push SW., POWER (XX,UL,EU,UK,AS)
⚠	48065200	Push SW., POWER (CSA)

5. F-5332 TAPE COUNTER DISPLAY & Control SW. Board (Stock No. 00968501)

Component Side

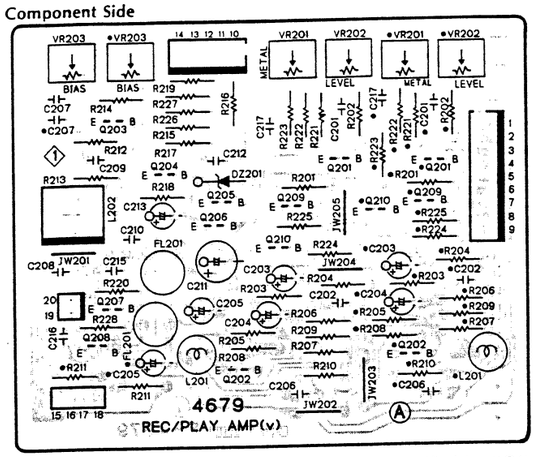


Parts List

Parts No.	Stock No.	Description
•IC		
nIC1	46671100	BA6146
nFL1	48345600	FL. Display Tube CP5262GR
•LED		
nLD1	07250900	TLG-123A, PLAY
nLD2	07251000	TLY-123, PAUSE
nLD3	46176900	TLS-123, REC
nC7	46711800	22μF 25V E.C.
oS1	48306900	Push SW., PAUSE
oS2	48306900	Push SW., PLAY
oS3	48306900	Push SW., REC MUTE
oS4	48306900	Push SW., REC
oS5	48306900	Push SW., REW
oS6	48306900	Push SW., FF
oS7	48306900	Push SW., STOP
oS8	48315900	Push SW., DOLBY NR
oS9	48369900	Push SW., AMPS, MEMORY, RESET
oS10	46178400	Slide SW., TIMER REC/PLAY
vVR1	48493100	10kΩ V.R., REC LEVEL
vVR2	48370200	10kΩ V.R., OUTPUT Level
•Diode		
wD9	03117600	1S2473T77
wD10	03117600	1S2473T77
wD11	03117600	1S2473T77
wD12	03117600	1S2473T77
wD13	03117600	1S2473T77

6-9. F-4679 REC Amp. Board (Stock No. 00968601)

Component Side



•**Note:** On this circuit board, the left channel is specified by "●" mark on top of the parts No.

Parts List

Parts No.	Stock No.	Description
•Transistor		
vQ201	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ202	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ203	46725801	2SC1627A
	or 48061801	2SC3244
vQ204	46614101	2SC3243
vQ205	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ206	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ209	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ210	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
•Zener Diode		
vDZ201	46109300	05Z3.0-X
	or 46109400	05Z3.0-Y
⚠vR214	46681300	10Ω 1/4W F.R.
vC208	46657200	4700pF 100V F.C.
vFL201	48363500	Trap Coil
vL201	48121500	Inductor 2.7mH
vL202	48363710	Bias OSC Coil
vVR201	10354100	47kΩ (B) S.V.R., METAL Rec Level adj.
vVR202	10353900	22kΩ (B) S.V.R., Rec level adj.
vVR203	10354300	100kΩ (B) S.V.R., Bias adj.

7. MAIN PARTS REPLACEMENT (See Exploded View on page 15)

A. Bonnet (See Fig. 7-1)

1) Remove two screws (Sc).
2) Pull the rear side of the bonnet and then remove it.

B. Bottom Plate (See Fig. 7-1)

1) Remove four screws (Sb), (Sc).
2) Pull the rear side of the bottom plate and then remove it.

C. Side Panel L (or R) (See Fig. 7-2)

1) Remove the bonnet and bottom plate.
2) Shift the position of the side panel L (or R) 2.0cm into the arrow direction ①.
3) Undo the hooks ② of the side panel and then pull it to the arrow direction ③ to remove it.

D. F-4678 and F-4679 Circuit Board

1) Remove the bonnet and the bottom plate.
2) Pluck out two connectors from F-4679 circuit board.
3) Pull out two connectors from the F-4678 circuit board.
4) Remove the protection cover on the F-4678 circuit board.
5) Unsolder the read wires of head.
6) Loosen two screws fixing F-4678 circuit board.

Fig. 7-1

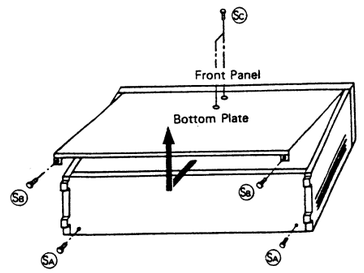
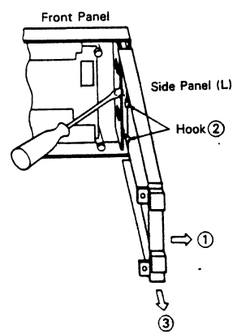


Fig. 7-2



to be continued ►

E. Damper Ass'y

1) Hold the damper holder to fix it, and push the damper ass'y to the arrow direction as Fig. 7-3, so that the damper ass'y is removed from the damper holder. (See Fig. 7-3)
2) Pinch the joint portion of the joint shaft and the damper ass'y, and remove the joint shaft from the groove of the damper holder after a little twist to the left. (See Fig. 7-4)
3) Turn up the damper end, to set the slit of the damper ass'y to the projection of the joint shaft. Then pull out the damper ass'y from the joint shaft. (See Fig. 7-5)

Fig. 7-3

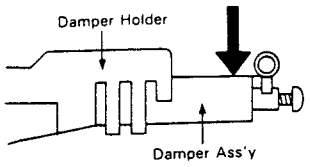
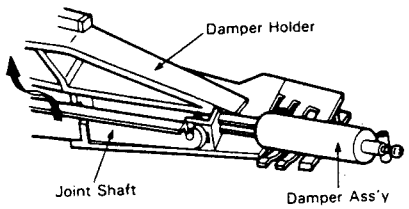


Fig. 7-4

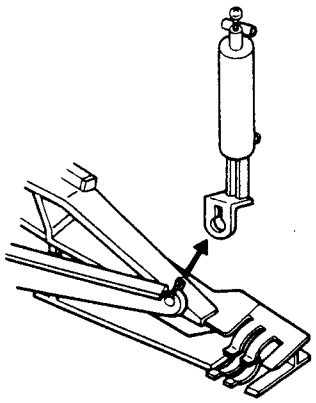


F. Mechanism Ass'y

1) Remove the bonnet, the bottom plate.
2) Remove two screws ⑤ (See Top View on page 16)
3) Pull the tension bar to undo the hooks and then remove it.
4) Pluck out two connectors from F-3748 board.
5) Extract two connectors from the F-4678 circuit board.
6) Disconnect five connectors from the F-4679 circuit board.
7) Remove the damper ass'y.
8) Remve the side panel R.
9) Take off counter belt around reel groove.
10) Loosen four screws to remove mechanism ass'y.
11) Push the " ▲ " mark to open cassette holder.
12) Take out the mechanism ass'y.

Note: Be careful not to snap cables.
To attach the mechanism ass'y, put the counter belt at the reel groove and push the eject lock lever to the arrow direction as Fig. 7-7.

Fig. 7-5



G. Rec/PB Head ⑳

1) Remove the mechanism ass'y from set.
2) Loosen two screws.
3) Unsolder read wires of head at head terminal.

H. Pinch Roller Ass'y ④

1) Remove the mechanism ass'y from set.
2) Pull out the lock pin ③.
3) Take out the pinchroller ass'y.

I. Reel Gear ⑰

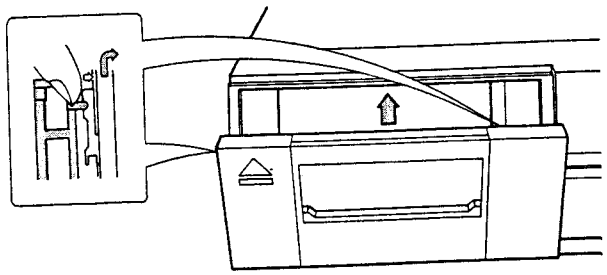
1) Remove the mechanism ass'y from set.
2) Remove the washers ⑮ and ⑯ fastening the reel gear.

J. Capstan Motor ㉛, Reel Motor ㉜, Capstan Belt ㉗, Flywheels ㉘ and Plunger ㊲

1) Remove the mechanism ass'y from set.
2) Remove the boards F-4678 and F-4679 from the mechanism ass'y.
3) Remove the sub-chassis.

* When reassembling these removed parts, take the follwing precaution: Assenbly the push (A) so that these parts are mutually positioned as shown in 3-3 on page 4 and 5.
* Unless positioned correctly, the mechanism ass'y may be operated erroneously. Remember that if the push arm (A) is positioned on the assist gear (A), the eject arm may be locked.

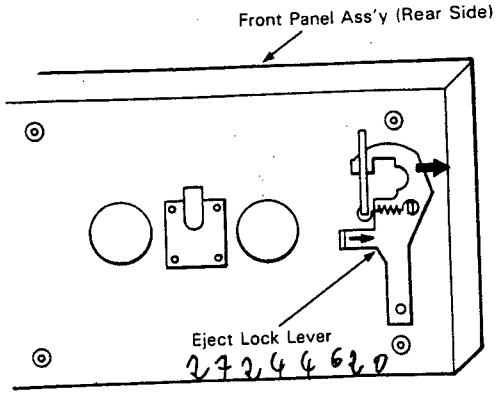
Fig. 7-6



K. Lid Ass'y

Press the " ▲ " mark to open the cassette holder, push the parts locked at the left and right in Fig. 7-6 while pulling it upward, and remove the lid ass'y.

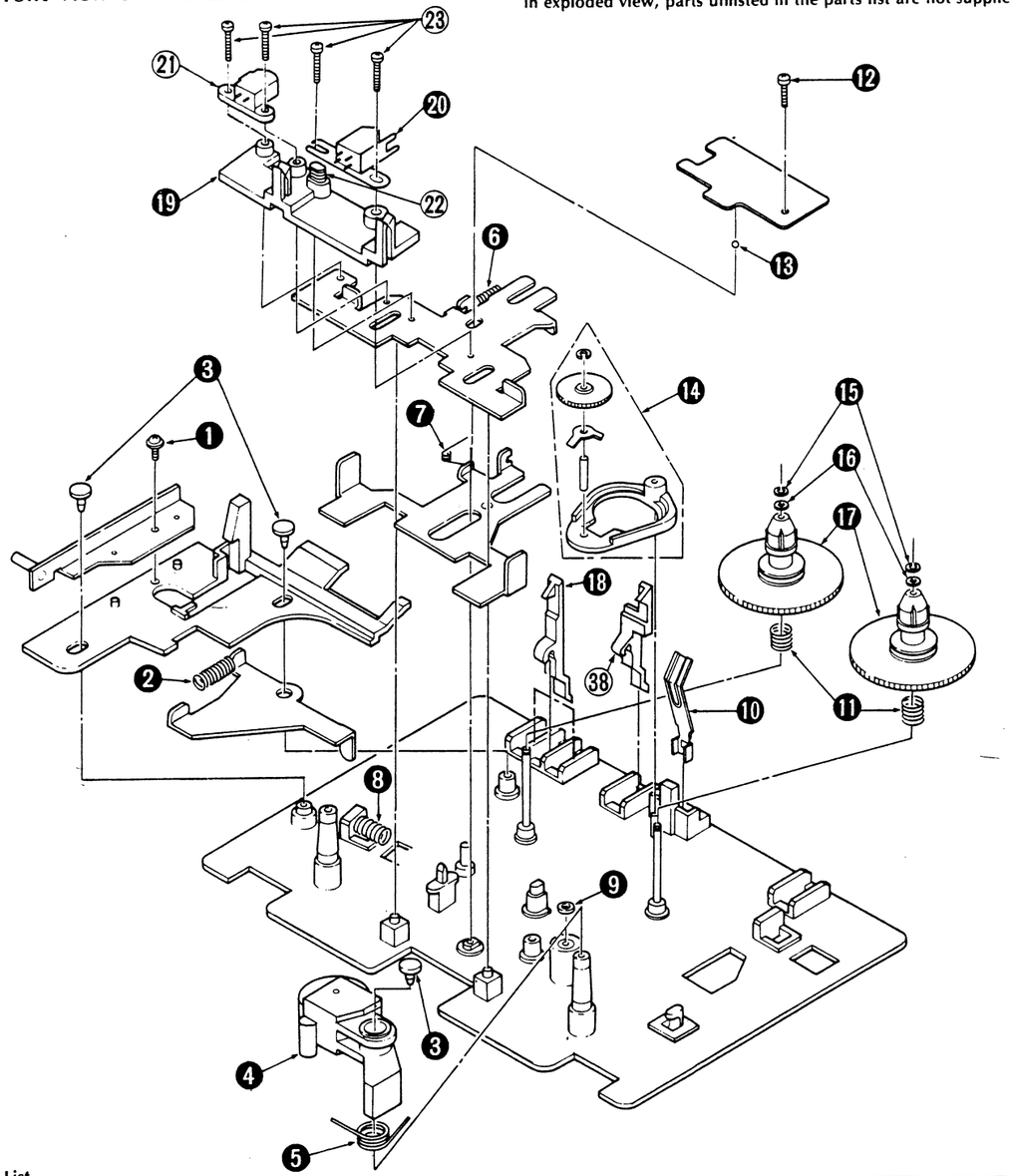
Fig. 7-7



8. EXPLODED VIEW OF MECHANISM ASS'Y & PARTS LIST

8-1. Front View of Mechanism Chassis

• Though every part included in mechanism ass'y is numbered in exploded view, parts unlisted in the parts list are not supplied.

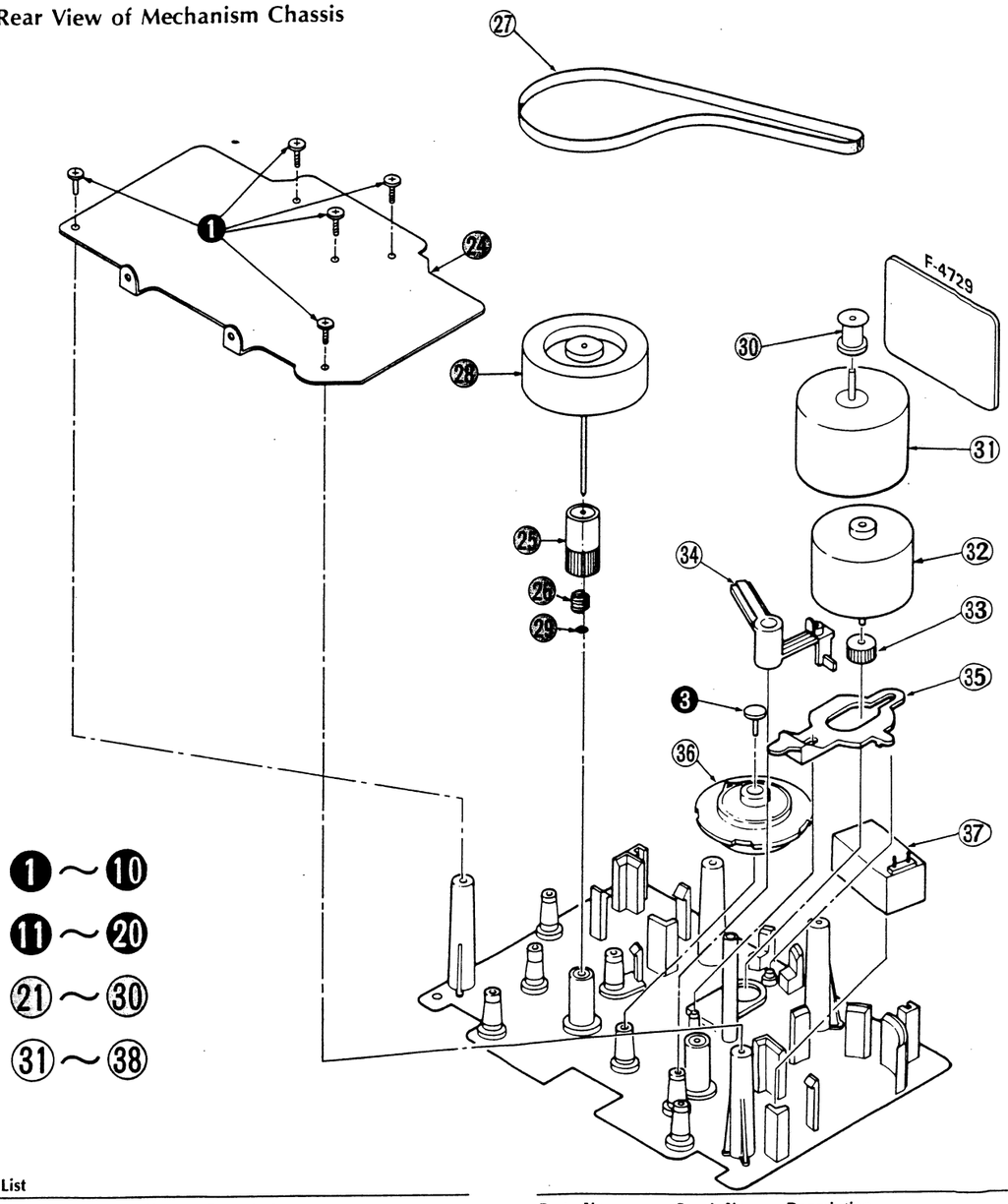


Parts List

Parts No.	Stock No.	Description
1	46267900	Tapping Screw, M3.0X8
2	47644500	Spring, eject
3	47420900	Plastic Tack
4	47281810	Pinch Roller Ass'y
5	47405500	Spring, pinch roller
6	47406200	Spring, head base
7	47405600	Spring, slide base
8	47668600	Spring, plunger solenoid
9	47404700	Washer, d = 2.5
10	47839400	Spring, half

Parts No.	Stock No.	Description
11	47709620	Spring, reel
12	18139300	Tapping Screw, M2X12
13	47404900	Steel Ball, ϕ2.0
14	47405000	Arm Ass'y
15	27083100	Washer, d = 1.6
16	47497100	Washer, d = 2.0
17	47835510	Reel Gear Ass'y
18	47723020	Sensor Arm (A)
19	47284110	Head Base
20	48369400	REC/PB Head

8-2. Rear View of Mechanism Chassis



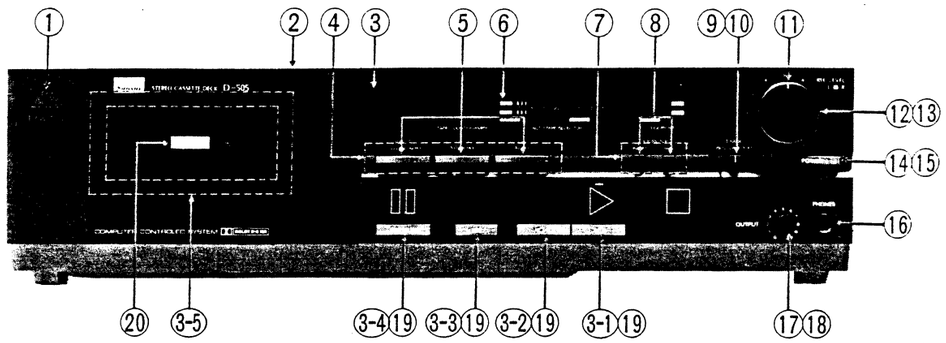
Parts List

Parts No.	Stock No.	Description
21	07997400	Erase
22	47406100	Spring, azimuth
23	00420900	Binding Head Screw, M2X12
24	———	Sub Chassis
25	47281210	Gear, flywheel ass'y
26	47530000	Spring A, flywheel
27	47405100	Belt
28	47282900	Flywheel Ass'y
29	47404600	Washer, d = 2.5

Parts No.	Stock No.	Description
30	47283200	Pully
31	●46737400	Capstan Motor
32	46737500	Reel Motor
33	47293110	Gear, reel motor
34	47903310	Lock Arm (A)
35	47293810	Arm (B)
36	47283830	Assist Gear
37	47292610	Plunger Solenoid
38	47292530	Sensor Arm B

9. OTHER PARTS

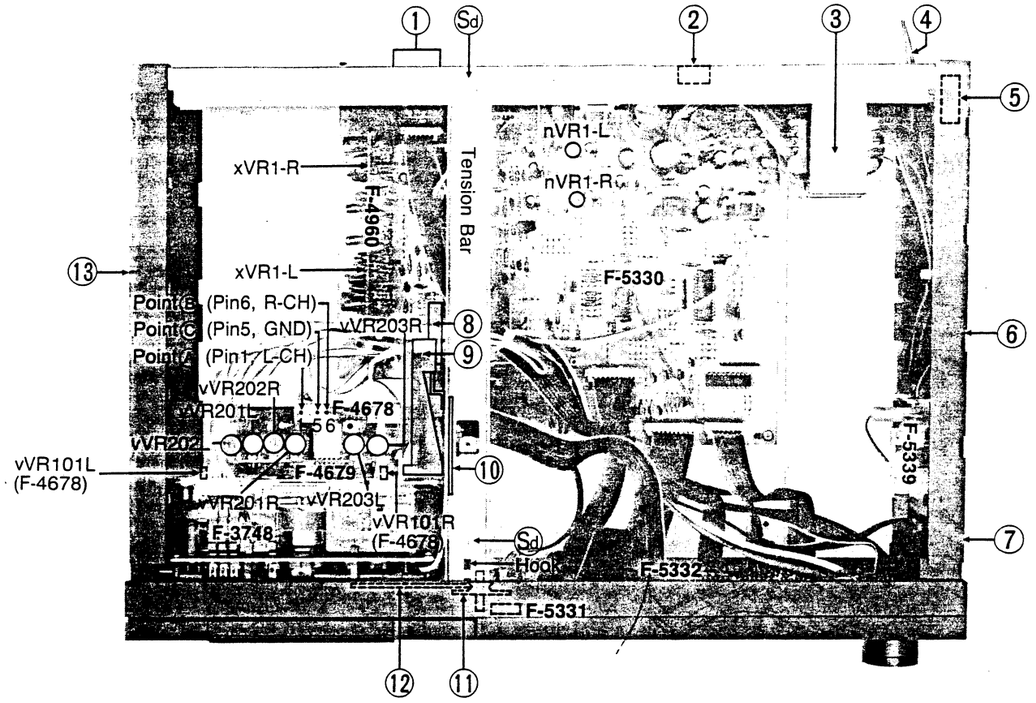
9-1. Front View



Parts List

Parts No.	Stock No.	Description
1	27129200	Lid Ass'y
2	27129800	Bonnet
3	27130200	Front Panel Ass'y
3-1	27133300	Push Knob, FF
3-2	27133400	Push Knob, REW
3-3	27159200	Push Knob, REC
3-4	27133500	Push Knob, REC MUTE
3-5	27128700	Cassette Holder Ass'y
4	48369900	Push SW., AMPS, MEMORY, RESET
5	27150500	Push Knob, AMPS, MEMROY, RESET
6	48345600	FL. Display Tube
7	48315900	Push SW., DOLBY NR
8	27150400	Push Knob, DOLBY NR
9	46178400	Slide SW., TIMER REC/PLAY
10	27127700	Slide Knob, TIMER REC/PLAY
11	27127800	Knob, REC LEVEL (L)
12	27127900	Knob, REC LEVEL (R)
13	48493100	10kΩ V.R., REC LEVEL
⚠14	46413900	Push SW., POWER (XX,UL,EU,UK,AS)
⚠	48065200	Push SW., POWER (CSA)
15	27127600	Push Knob, POWER
16	46265700	Jack, PHONES
17	27128000	Knob, OUTPUT
18	48370200	10kΩ V.R., OUTPUT
19	48306900	Push SW., PAUSE, PLAY, REC, REC MUTE, REW, FF, STOP
20	48389900	LED Ass'y (SLF-401C)

9-2. Top View



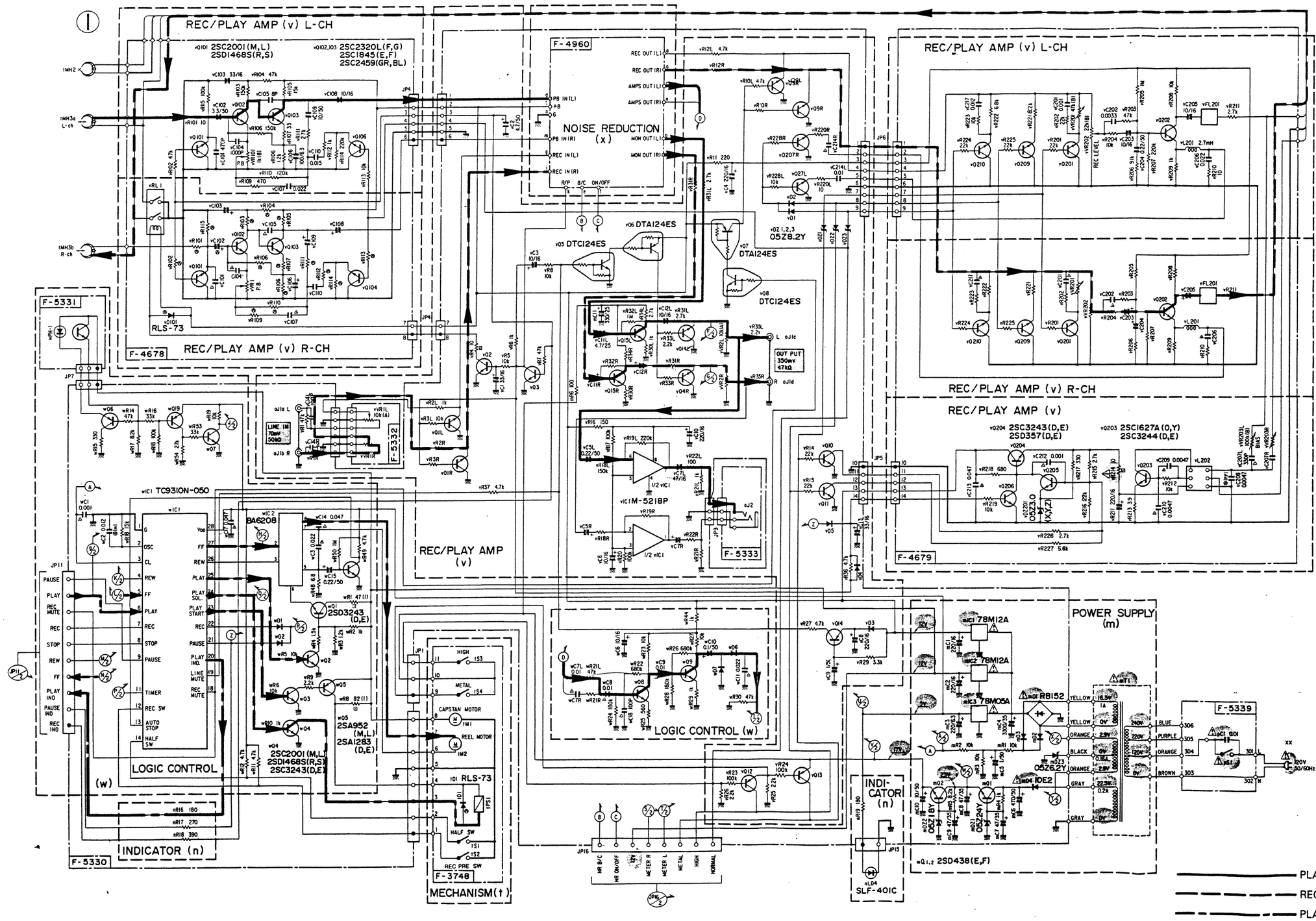
Parts List

Parts No.	Stock No.	Description
1	46371500	4P Terminal, LINE IN/OUT
⚠ 2	07204700	Slide SW., VOLTAGE SELECTOR (EU,UK)
⚠ 3	15024301	Power Transformer (XX)
⚠	15024302	Power Transformer (UL,CSA)
⚠	15024305	Power Transformer (EU,UK,AS)
⚠ 4	38004700	Power Supply Cord (XX,UL,CSA)
⚠	38004500	Power Supply Cord (EU)
⚠	07204200	Power Supply Cord (AS)
⚠	38004300	Power Supply Cord (UK)
5	47157300	AC Cord Cover
6	47679100	Side Panel Ass'y (R)
7	47113110	Joint Shaft
8	48126700	Damper Ass'y
9	47628900	Damper Holder
10	47628500	Damper Joint Shaft
11	27159100	Counter Pulley Ass'y
12	47843300	Counter Belt
13	47608900	Side Panel Ass'y (L)

10. SCHEMATIC DIAGRAM

10-1. Main Section

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten



2SA952 2SA933
2SA1283 2SA1175
2SC1627A 2SC1740S
2SC1845 2SC2785
2SC2001 2SD14685
2SC2320L DTA124ES
2SC3243 DTC124ES
2SC3244
2SD438

BA6208 2SA1115 2SC2458 2SC2459 2SC2603

BA6146
CX20187
LB1291
M5218P
M50763-412SP
TC9310N-050

RLS-73 NJM78M05A NJM78M12A

RB-152

1S1588
1S2473
10E2
0A90-M

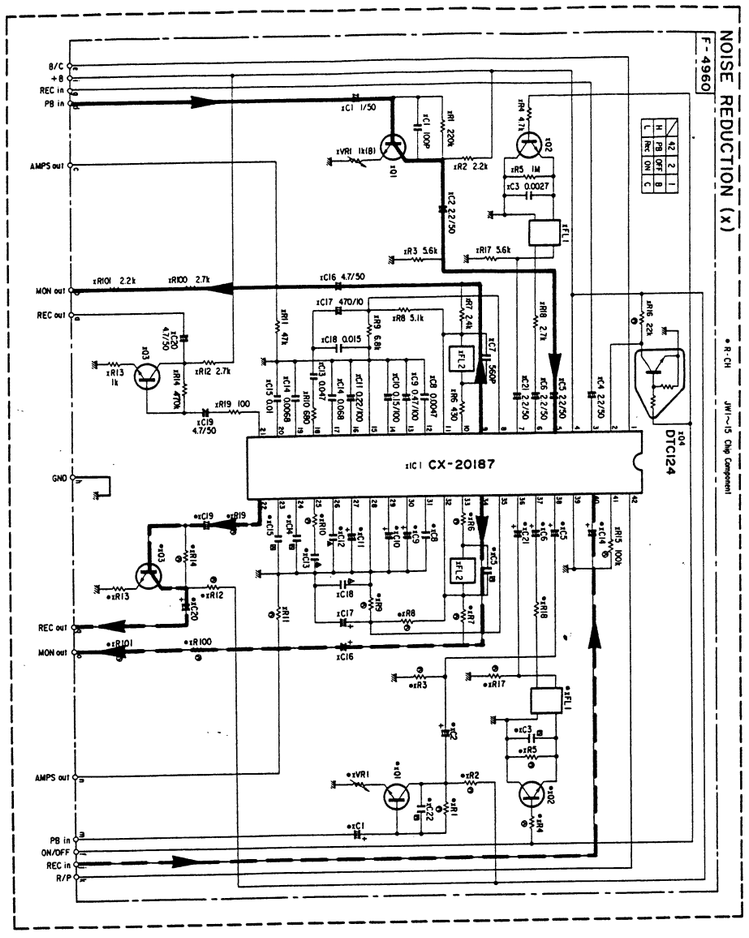
TLS-123 TLS-123A

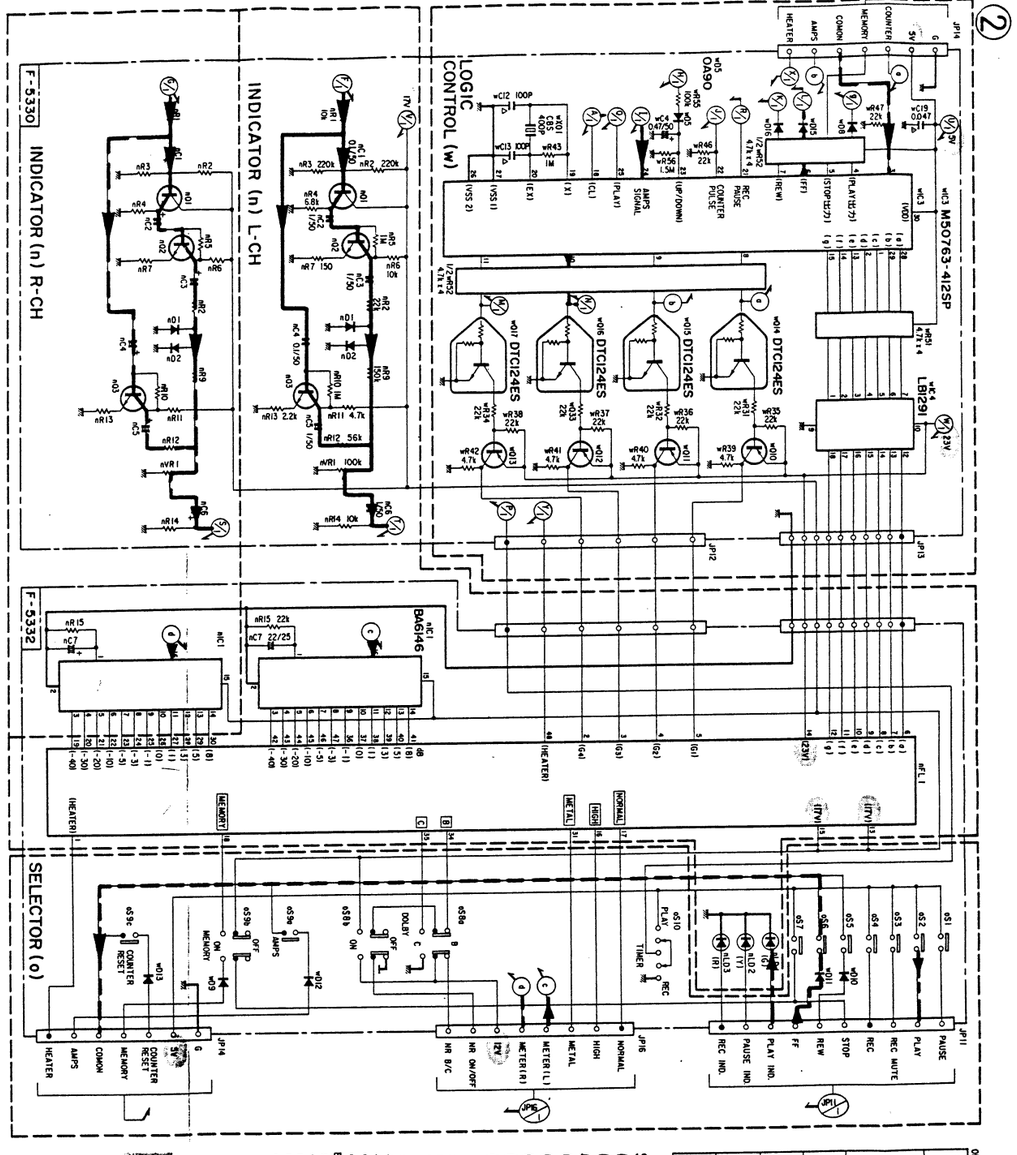
05Z3.0
05Z6.2
05Z8.2
05Z20
05Z24

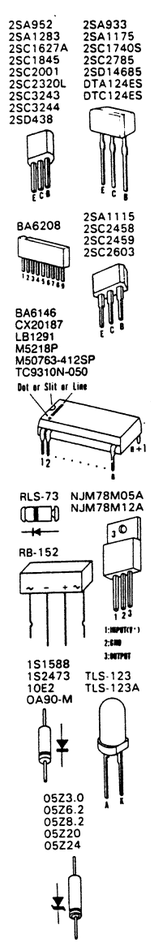
A | B | C | D | E | F | G | H

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

10-2. Display & Noise Reduction Section







OPTIONAL USE OF SEMICONDUCTOR		
▲D2,3	4D12	1S2473D 1S1588
▲D1-5	D1,2,6~13,15,16	
▲D1~3	D4~9~11,13 104,201,202 203~207,209,210	2SC2603(E,F,G) 2SC1740S(R,S,E) 2SC2458(Y,GR) 2SC2785(J,H,F,E)
▲D1~3	D12,37~9,18	
▲D12~14 ▲D6,10~13,19		2SA1115(E,F) 2SA933S(R,S,E) 2SA1175(J,H,F,E)
▲LD1 (G)		TLG-123A GL-3E07 SEL-2410E
▲LD2 (Y)		TLY-123 GL-3H757 SEL-2910A
▲LD3 (R)		TLS-123 GL-3H07 SEL-2210S

SYMBOL OF FUNCTION
(m) POWER SUPPLY
(n) INDICATOR
(o) SELECTOR
(p) FIXED PARTS
(t) MECHANISM
(v) REC/PLAY AMP
(w) LOGIC CONTROL
(x) NOISE REDUCTION

CHIP RESISTORS : Are 1/8 Watts
Each D.C Voltage above the nominal value in volts during recording

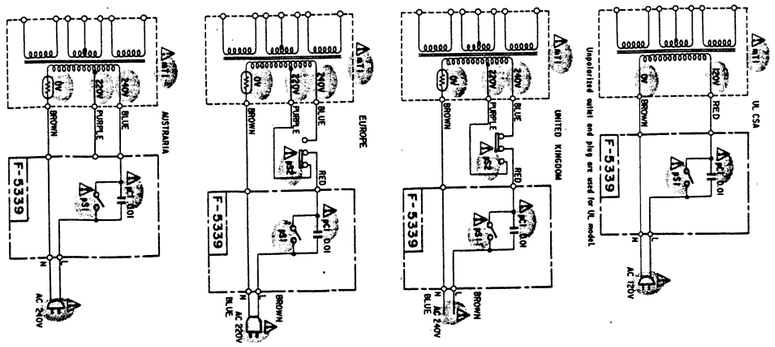
SYMBOL
△ Ceramic Capacitor
▲ Barrier Layer Capacitor
● Mual Mylar Capacitor
● Low-Leak Electrolytic
BP Bi-Polar Electrolytic
Metallized Polyester
□ Chip Component (Cylindrical Type)
■ Chip Component
■ Fusing Resistor
Mylar Polypropylene Film

RESISTORS
All are in ohms, 1/4 Watts, ± 5% Tolerance
Unless Otherwise Noted, K-10³, M-10⁶

CAPACITORS
All are in μF, Unless Otherwise Noted, P-μμF

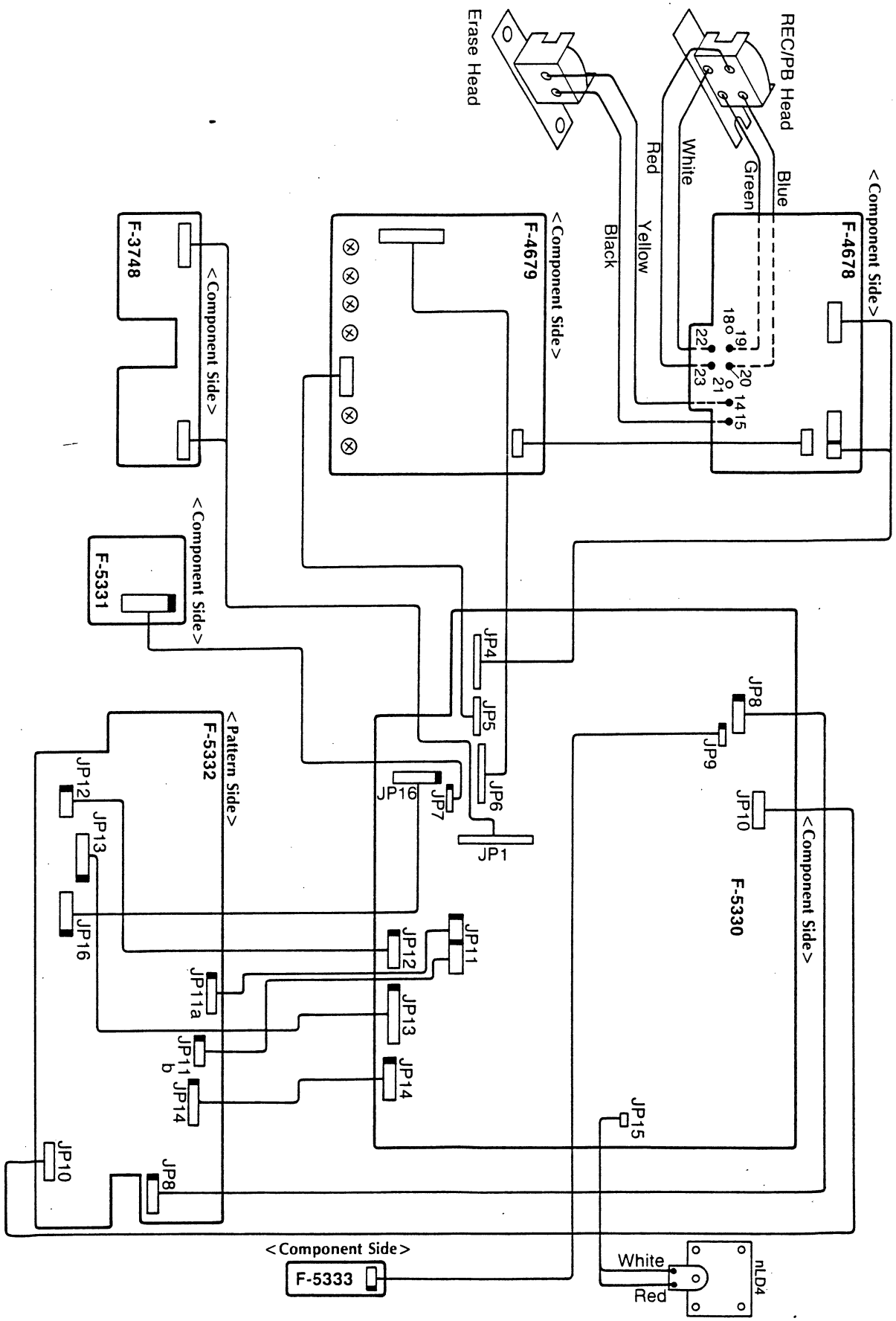
Electrolytic Capacitor Capacitance(μF)/Volt(V)

⚠ Indicates safety part. It should be replaced with the same part number as the one replaced. Use only replacement part recommended by the manufacturer.



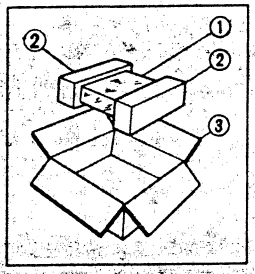
PLAY Signal Line
REC Signal Line
PLAY Operation Line
FF Operation Line

11. WIRING DIAGRAM



12. PACKING LIST

Parts No.	Stock No.	Description
1	47859100	Vinyl Bag
2	27130100	Styrofoam Packing
3	27127500	Carton Case



13. ACCESSORY LIST

Stock No.	Description
07193400	PJP Cord
or 38103300	PJP Cord
46998700	Operating Instruction (*E·F·S)
46998800	Operating Instruction (*G·I·Sw)

***Note:**
E·F·S: English·French and Spanish Version
G·I·Sw: German·Italian and Swedish Version

Sansui

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PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)
SANSUI ELECTRONICS CORPORATION: 1250 Valley Brook Ave., Lyndhurst, N.J. 07071 U.S.A.
17150 South Margay Ave., Carson, California 90746 U.S.A.
3036 Koapaka Street., Honolulu, Hawaii 96819 U.S.A.
SANSUI ELECTRONICS (U.K.) LTD.: Unit 10A, Lyon Industrial Estate, Rockware Avenue, Greenford, Middx UB6, OAA, England
SANSUI ELECTRONICS G.M.B.H.: Pau Ehrich Strasse 8, 6074 Rödermark 2, West Germany

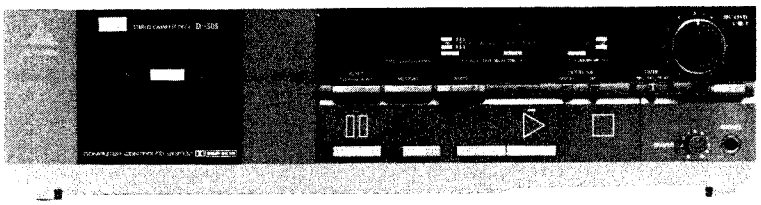
(SM1-294) Printed in Japan (268220M) <Stock No. 3652130C>

n.l

SERVICE MANUAL

STEREO CASSETTE DECK

SANSUI D-505



CAUTION

1. Parts identified by the⚠symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

Sansui

SANSUI ELECTRIC CO., LTD.

•SPECIFICATIONS

Track format ..... 4-track/2-channel system
Tape speed ..... 4.8 cm/sec.
Heads (2-head configuration)
Rec/pb head ..... HIGH-Bs hard permalloy
Erase head ..... Double-gap HIGH-Bs ferrite
Motor ..... Capstan: Electronically Controlled DC Moto
Reels: DC Motor
Wow/flutter ..... 0.045% max (WRMS)
Fast forwarding (rewinding) time
..... Approx. 85 sec.
(for C-60 tape)
Frequency response (—20 VU recording/playback)
Normal tape (LH) ..... 20 to 17,000 Hz
(30 to 16,000 Hz ±3 dB)
Chrome tape ..... 20 to 18,000 Hz
(30 to 17,000 Hz ±3 dB)
Metal tape ..... 20 to 19,000 Hz
(30 to 18,000 Hz ±3 dB)
Signal-to-noise ratio (recording/playback with metal tape
DOLBY NR OFF ..... Better than 58 dB
DOLBY-B NR ON ..... Better than 66 dB
(above 5 kHz)
DOLBY-C NR ON ..... Better than 72 dB
(above 1 kHz)
Erasure rate (metal tape)
..... More than 70 dB at 1 kHz
Recording bias frequency
..... 105 kHz
Input sensitivity/Impedance
LINE IN (REC) ..... 70 mV/47 kohms
Power requiremets 120/220/240V
50/60 Hz
For U.S.A. and Canada
..... 120V (60 Hz)
Power consumption ..... 20 watts
Dimensions ..... 430 mm (16-15/16") W
111 mm (4-3/8") H
310 mm (12-1/4") D
Weight ..... 4.8 kg (10.6 lbs) net
6.1 kg (13.4 lbs) packed

* Design and specifications subject to changes without notice for improvements.
* Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double D symbol are trade marks of Dolby Laboratories Licensing Corporation.

CAUTION

1. The symbols, UL, CSA, SA, BS, UK, EU, AS and XX on the parts list and the schematic diagram mean followings respectively.

   UL..... Manufactured for U.S.A market.
   (Underwriters Laboratories approved model.)
   CSA..... Manufactured for Canadian market.
   SA..... Manufactured for South African market.
   BS, UK ..... Manufactured for United Kingdom market.
   EU ..... Manufactured for European market.
   AS..... Manufactured for Australian market.
   XX..... Standard Version.
   NON MARK ..... Common Parts.

2. Some printed circuit boards are not supplied as the assembled. To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.

3. Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.

4. Abbreviations in this service manual are as follows.

•Abbreviations List

C.R.	: Carbon Resistor	E.B.L.	: Low Leak Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor	Ta.C.	: Tantalum Capacitor
Ce.R.	: Cement Resistor	F.C.	: Film Capacitor
M.R.	: Metal Film Resistor	M.P.	: Metalized Paper Capacitor
F.R.	: Fusing Resistor	P.C.	: Polystyrene Capacitor
N.I.R.	: Non-Inflammable Resistor	G.C.	: Gimmic Capacitor
A.R.	: Array Resistor	A.C.	: Array Capacitor
C.C.	: Ceramic Capacitor	V.R.	: Variable Resistor
C.T.	: Ceramic Capacitor, Temperature Compensation	S.V.R.	: Semi Variable Resistor
E.C.	: Electrolytic Capacitor	SW.	: Switch
E.L.	: Low Leak Electrolytic Capacitor	Chip R.	: Chip Resistor
E.B.	: Bi-Polar Electrolytic Capacitor	Chip C.	: Chip Capacitor

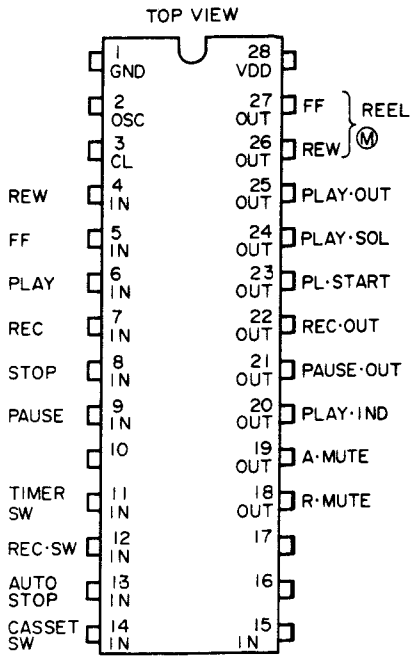
2. MODE OPERATION & TIMING CHART OF IC TC9310N-050

•Mode Operation of IC TC9310N-050

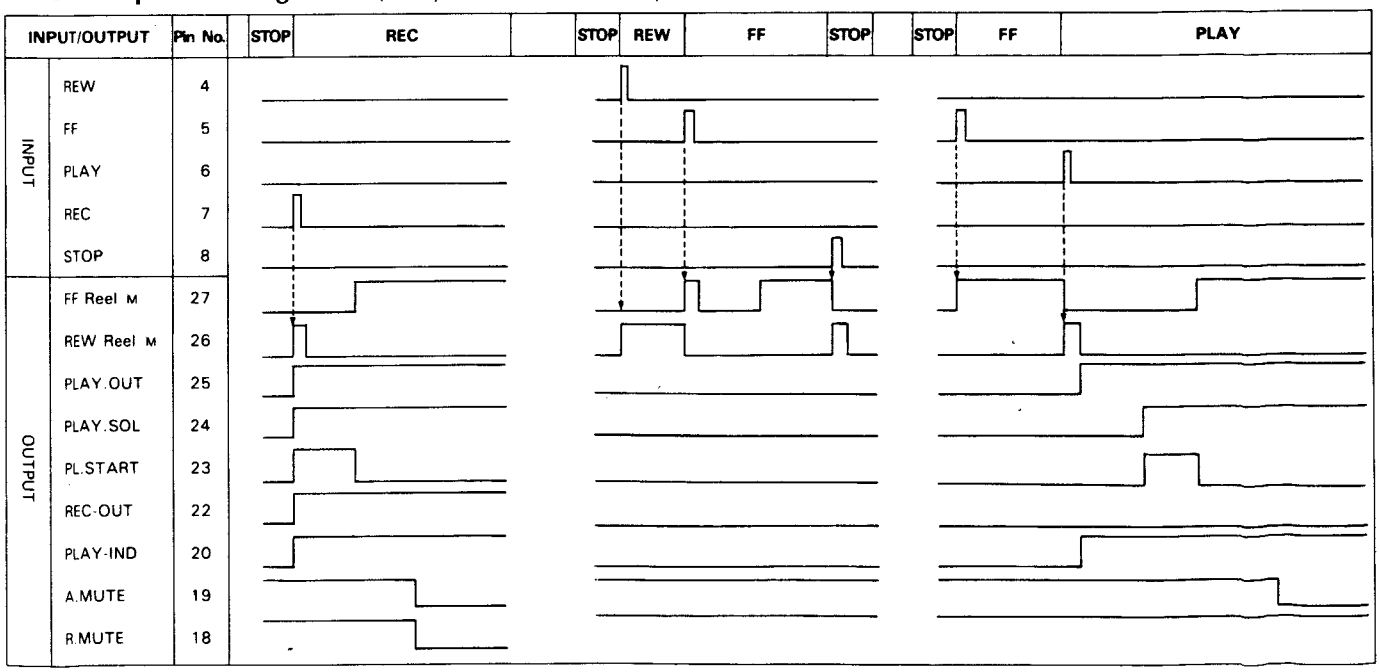
PRESENT MODE \ INPUT KEY	STOP	PLAY	F.F	REW	REC	PAUSE	AUTO STOP
STOP	–	PLAY	F.F	REW	REC (–)	PAUSE	
PLAY	STOP	–	CUE	REVIEW	–	PLAY.PAUSE	STOP
F.F	STOP	PLAY	–	REW	–	–	STOP
REW	STOP	PLAY	F.F	–	–	–	STOP
CUE	STOP	PLAY	–	REW	–	–	STOP
REVIEW	STOP	PLAY	F.F	–	–	–	STOP
REC	STOP	–	F.F	REW	–	REC.PAUSE	STOP
PAUSE	STOP	PLAY.PAUSE	F.F	REW	REC.PAUSE (–)	STOP	
PLAY.PAUSE	STOP	–	F.F	REW	REC.PAUSE (–)	PLAY	
REC.PAUSE	STOP	–	F.F	REW	–	REC	

•**Note**: 1. This table shows operation when one input key is depressed on present mode.
2. Que is in the state of PLAY mode under FF operation.
Review is in the state of PLAY mode under REW operation.
— mark means continuing present mode.
mark means non relation with other input ports.

•Pin-connection

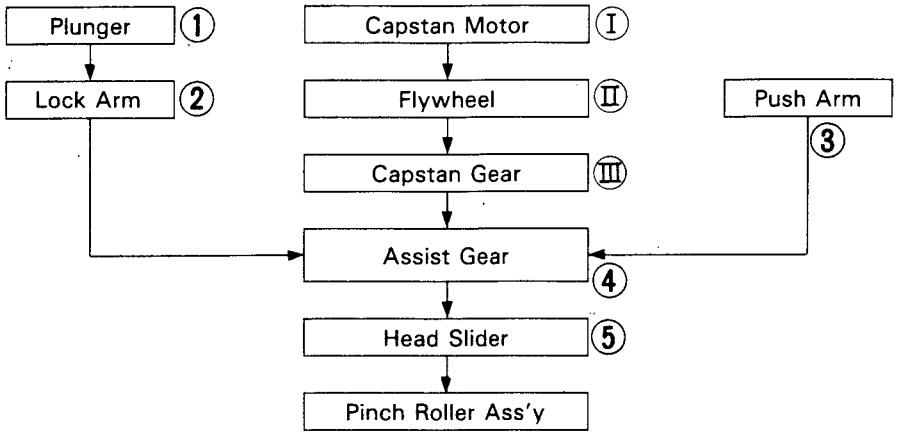


•Microcomputer Timing Chart (REC, REW→FF→STOP, FF→PLAY)



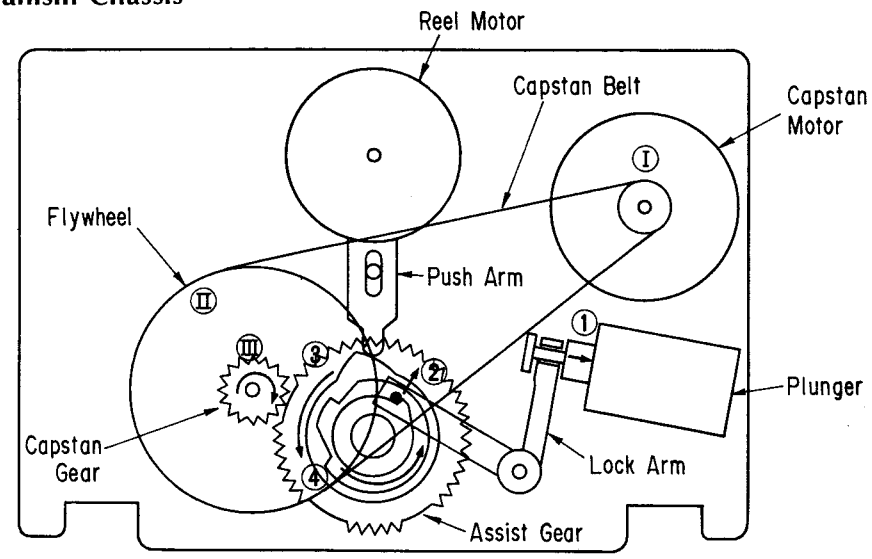
3. OPERATIONS OF PINCH ROLLER

3-1. Torque Transportation Flowchart

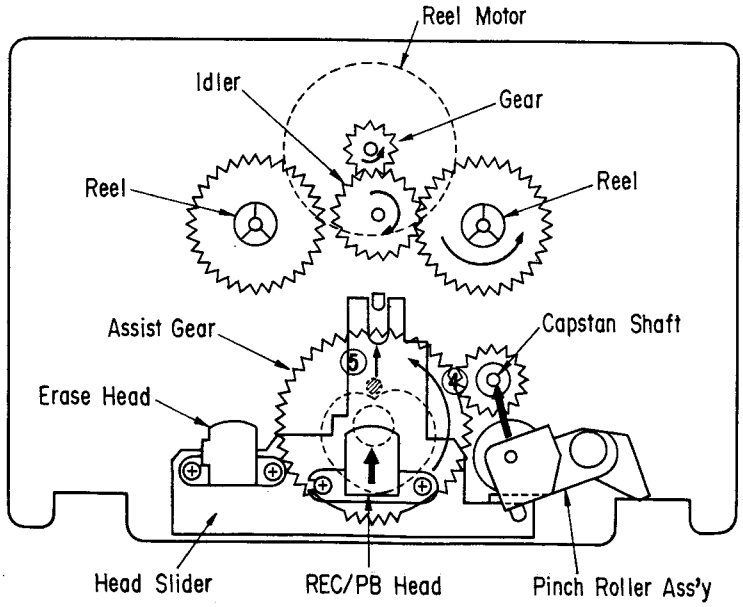


• The pinch roller is brought into pressure contact with the capstan shaft.

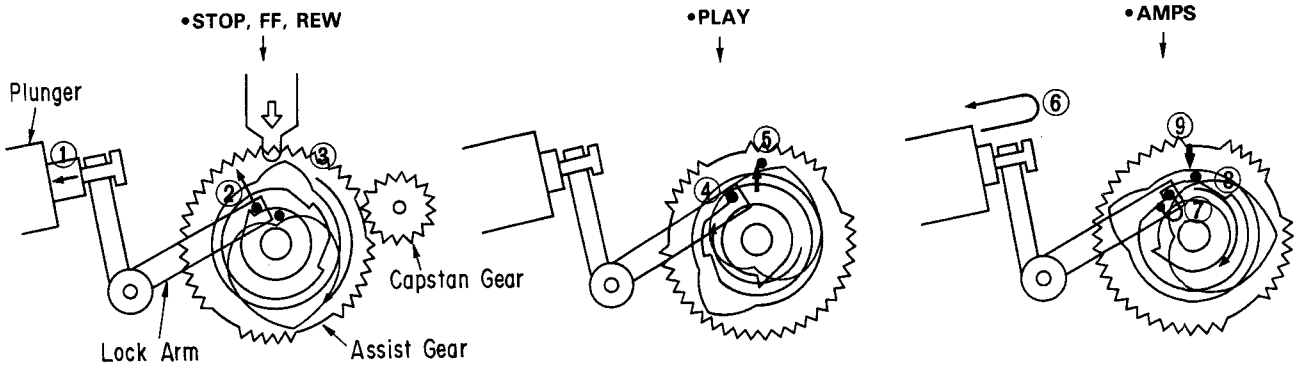
3-2. Rear View of Mechanism Chassis



3-3. Front View of Mechanism Chassis



3-4. Cam Positions in the Modes of PLAY, FF, REW & STOP



4. ADJUSTMENTS

4-1. Tape Speed Adjustment

Note: 1. Use Sansui Test Tape, SCT-S3K (3 kHz signal is recorded on the tape).
2. Connections are shown in Fig. 4-1.
3. Remove the cassette lid.
(Refer to removement of Lid Ass'y on Page 14)

Fig. 4-1

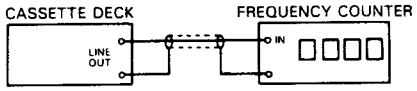
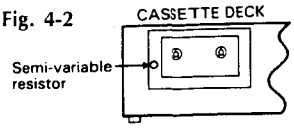


Fig. 4-2



STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	Tape Speed Adj.	LINE OUT Frequency counter	Playback the TEST TAPE SCT-S3K	Turn semi-variable resistor as Fig. 4-2	3000Hz ± 45Hz	Use small screw driver

4-2. Playback Adjustment

Note: 1. Before this adjustment, clean REC/P.B. head surface.
2. For this adjustment, use Sansui Test Tape, SCT-F10K, and SCT-L400.
3. Set the Dolby NR switch to be OFF.
4. Connections are shown in Fig. 4-3.
5. Set the OUTPUT volume to be MAX position.

Fig. 4-3

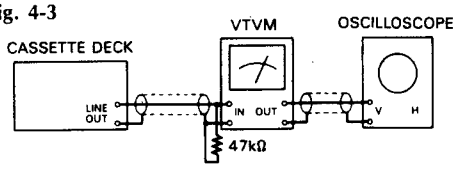
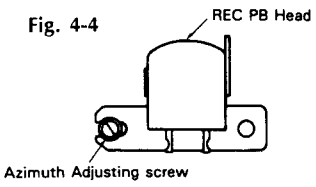


Fig. 4-4

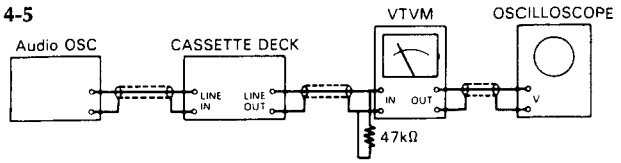


STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	REC/P.B. Head Adj.	LINE OUT VTVM and Scope	Playback the TEST TAPE SCT-F10K	Adjust the azimuth adjusting screw in Fig. 4-4.	MAX. Output both channels	Refer to removement of Lid Ass'y on Page 14. After this adjustment, lock the screw with paint.
2.	Playback Level Pre Adj.	Between Point Ⓐ (Pin1, L-CH)/ Point Ⓑ (Pin6, R-CH) and Point Ⓒ (Pin5, GND) VTVM and Scope	Playback the TEST TAPE SCT-L400	Adjust each vVR101 (L-CH and R-CH, F-4678)	10mV ± 2dB	See Top View on Page 16.
3.	Playback Level Adj.	LINE OUT VTVM and Scope	Playback the TEST TAPE SCT-L400	Adjust each xVR1 (L-CH and R-ch, F-4960)	500mV ± 2dB	See Top View on Page 16.

4-3. REC Level & Frequency Response Adjustment

Note: 1. Connections are shown in Fig. 4-5.
2. Set the Dolby NR switch to be OFF.
3. Set the OUTPUT volume to be MAX position.
4. Set the REC LEVEL volume to be MAX position.

Fig. 4-5

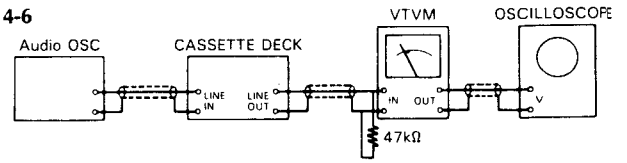


STEP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	REC Level Adj.	Feed 1kHz from Audio S.G. into LINE IN.	LINE OUT, VTVM and Scope	Load the TEST TAPE SCT-SA. 1. Push the PAUSE, and REC knob. 2. Adjust the output level of Audio SG. for obtaining 200mV on VTVM. 3. Push the PAUSE knob, then record the 1kHz signal. 4. Playback the 1kHz signal. 5. Confirm that the output levels on both channels are 200mV ±2dB on VTVM.	1. If not turn vVR202 (REC, L-CH, F-4679) and vVR202 (REC, R-CH, F-4679) until output level 200mV ± 2dB on both channels are obtained.	vVR202 (REC, L-CH) and vVR202 (REC, R-CH) are shown in Top View on Page 16.
2.	Frequency Response Adj.	Feed 1kHz 10mV and 10kHz 10mV, from Audio S.G. into LINE IN.	Same as above	Load the TEST TAPE SCT-SA. 1. Record the 1kHz and 10kHz signals. 2. Playback the 1kHz and 10kHz signals, then confirm that both output levels equal.	1. If not, adjust vVR203 (F-4679) for L-CH and vVR203 (F-4679) for R-CH slightly until the output levels will be equal.	
3.	METAL REC Level Adj.	Feed 1kHz from Audio S.G. into LINE IN.	LINE OUT, VTVM and Scope	Load the TEST TAPE SCT-MA. 1. Push the PAUSE, and REC knob. 2. Adjust the output level of Audio SG. for obtaining 200mV on VTVM. 3. Push the PAUSE knob, then record the 1kHz signal. 4. Playback the 1kHz signal. 5. Confirm that the output levels on both channels are 200mV ±2dB on VTVM.	1. If not turn vVR201 (METAL, L-CH, F-4679) and vVR201 (METAL, R-CH, F-4679) until output level 200mV ± 2dB on both channels are obtained.	vVR201 (METAL, L-CH) and vVR201 (METAL, R-CH) are shown in Top View on page 16.

4-4. Peak Level Indicator Adjustment

Note: 1. Connections are shown in Fig. 4-6.
2. Set the OUTPUT volume to be MAX position.

Fig. 4-6



STEP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	Peak Level Indicator Adjustment	Feed 1kHz, 100mV from S.G. into LINE IN.	LINE OUT, VTVM and Scope	Load the TEST TAPE SCT-SA. 1. Push on PAUSE, and REC knob. 2. Adjust the REC LEVEL knob for obtaining 500mV on VTVM.	1. Light the 0dB point on level indicator to adjust nVR1 (F-5330). 2. Adjust the REC LEVEL knob for obtaining 490mV on VTVM, then confirm the 0dB point on level indicator go out. 3. If not, adjust nVR1, until SETTING 1 ~ ADJUSTMENT 2 will be obtain:	nVR1 are shown in Top View on Page 16.

◆ List of Sansui Test Tape

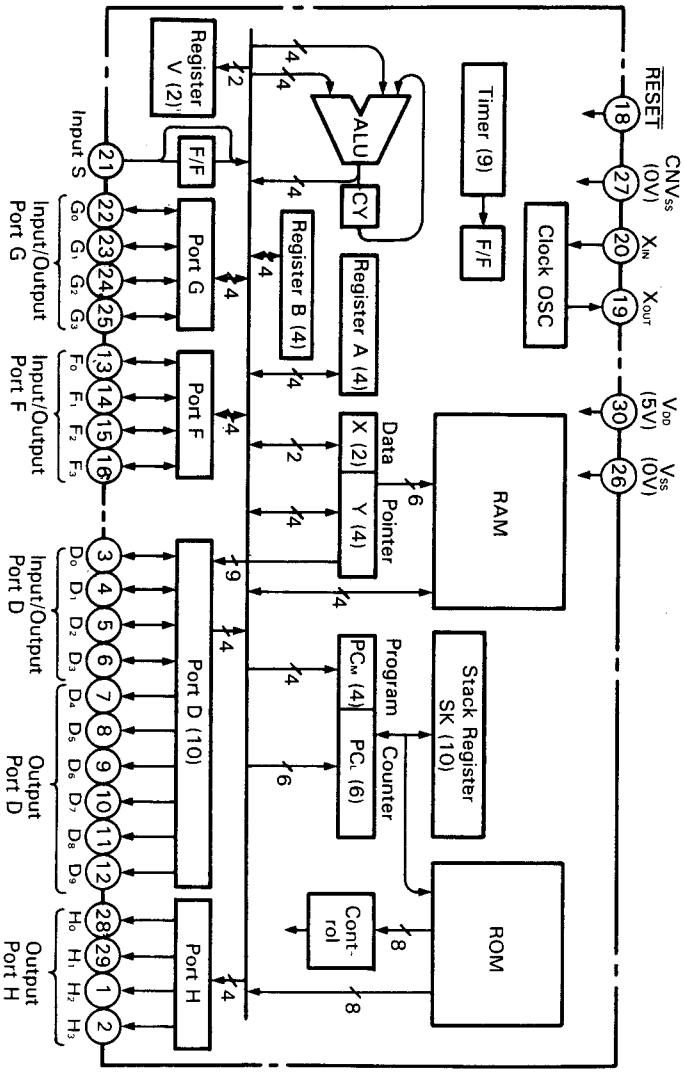
Name of TEST TAPE	Recorded Frequency	Description	Equivalent To
SCT-F40	40 Hz	Playback Frequency Response Check	–
SCT-F1K	1 kHz	High Frequency Equialization Check	–
SCT-F10K	10 kHz	REC/PB Head Adjustment	–
SCT-L400N	400 Hz	Playback Level and Indicator Level Adjustment	–
SCT-S3K	3 kHz	Speed Check and Wow & Flutter Check	–
*SCT-AD (NORMAL)	–	Recording Bias Adjustment	TDK AD
*SCT-SA (HIGH)	–	REC/PB Level Adjustment	TDK SA
*SCT-MA (METAL)	–	Frequency Response Check	TDK MA

•**Note:** Some reference tapes marked * are not supplied.
As these are equivalent to ones indicated above, please obtain these blank tapes on your side as possible.

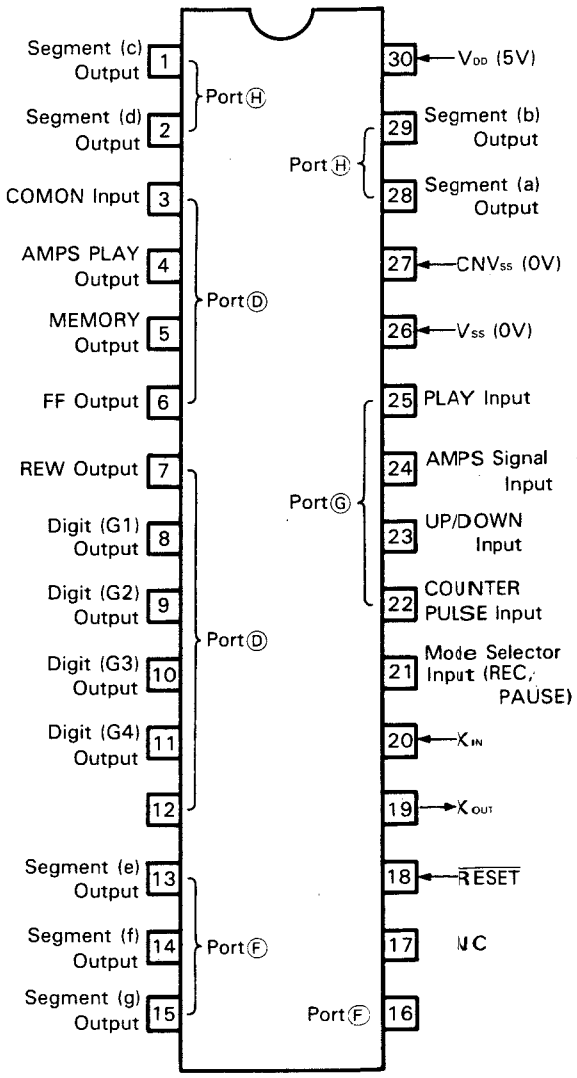
5. INTERIOR BLOCK DIAGRAM OF IC

•M50763-412SP (Microcomputer for TAPE COUNTER DISPLAY & AMPS)

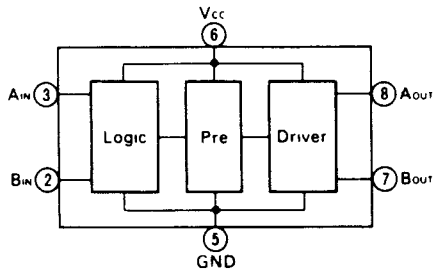
<Block>



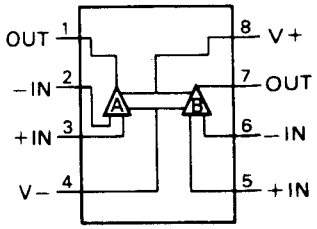
<Description of Terminals>



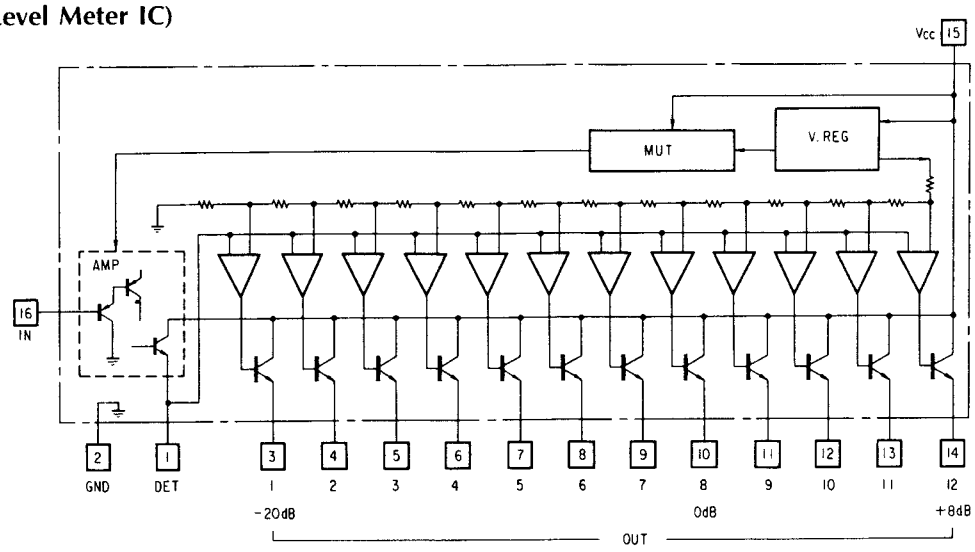
•BA6208 (Motor Drive IC)



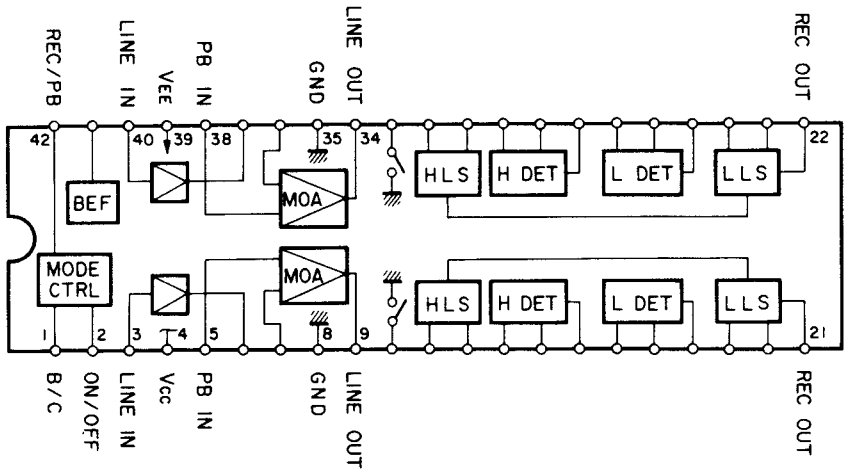
•M5218P (OP AMP. IC)



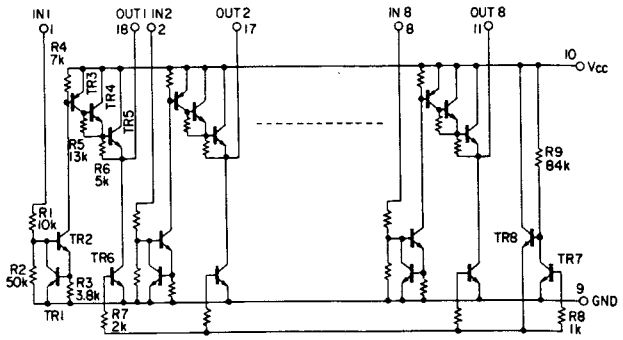
•BA6146 (Peak Level Meter IC)



•CX-20187 (Dolby Noise Reduction IC)



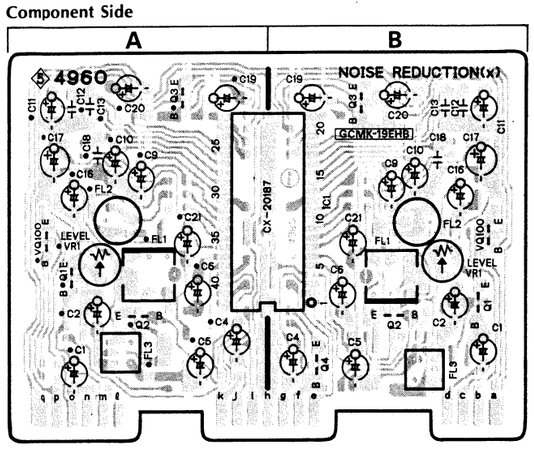
•LB1291 (FL. Display Driver IC)



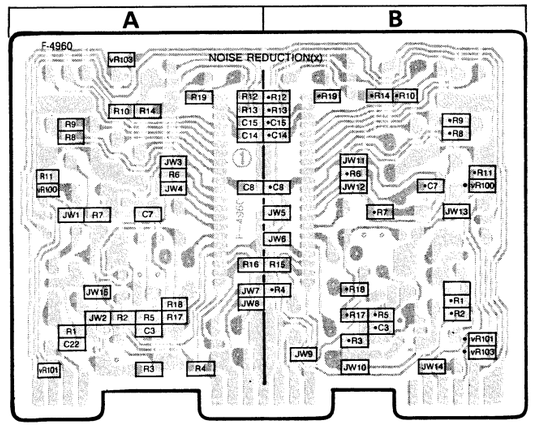
6. PARTS LOCATION & PARTS LIST

6-1. F-4960 Noise Reduction Board (Stock No. 00971601)

Component Side



Pattern Side <Chip Parts>



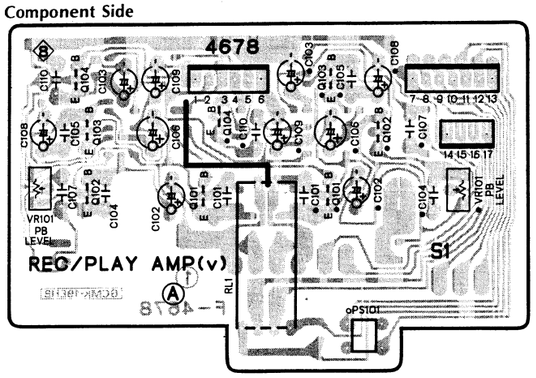
•**Note:** On this circuit board, the right channel is specified by "●" mark on top of the parts No.

Parts List

Parts No.	Stock No.	Description
•Transistor		
xQ1	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
xQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
xQ3	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
xQ4	46719900	DTC124ES
•IC		
xIC1	48179900	CX-20187
xJW1	46741100	Cross Conductor (Chip)
xJW3	46741100	Cross Conductor (Chip)
xJW4	46741100	Cross Conductor (Chip)
xJW5	46741100	Cross Conductor (Chip)
xJW6	46741100	Cross Conductor (Chip)
xJW7	46741100	Cross Conductor (Chip)
xJW8	46741100	Cross Conductor (Chip)
xJW9	46741100	Cross Conductor (Chip)
xJW11	46741100	Cross Conductor (Chip)
xJW12	46741100	Cross Conductor (Chip)
xJW13	46741100	Cross Conductor (Chip)
xJW14	46741100	Cross Conductor (Chip)
xJW15	46741100	Cross Conductor (Chip)
xR1	46753200	220kΩ 1/8W Chip R.
xR2	46748200	1.8kΩ 1/8W Chip R.
xR3	46749400	5.6kΩ 1/8W Chip R.
xR4	46749200	4.7kΩ 1/8W Chip R.
xR5	46754800	1MΩ 1/8W Chip R.
xR6	46746700	430Ω 1/8W Chip R.
xR7	46748500	2.4kΩ 1/8W Chip R.
xR8	46749300	5.1kΩ 1/8W Chip R.
xR9	46749600	6.8kΩ 1/8W Chip R.
xR10	46747200	680Ω 1/8W Chip R.
xR11	46751600	47kΩ 1/8W Chip R.
xR12	46748600	2.7kΩ 1/8W Chip R.
xR13	46747700	1.1kΩ 1/8W Chip R.
xR14	46754000	470kΩ 1/8W Chip R.
xR15	46752400	100kΩ 1/8W Chip R.
xR16	46750800	22kΩ 1/8W Chip R.
xR17	46749400	5.6kΩ 1/8W Chip R.
xR18	46748600	2.7kΩ 1/8W Chip R.
xR19	46745200	100Ω 1/8W Chip R.
xR100	46748600	2.7kΩ 1/8W Chip R.
xR101	46748400	2.2kΩ 1/8W Chip R.
xC3	46794800	2700pF 50V Chip C.
xC7	46779900	560pF 50V Chip C.
xC8	46795100	4700pF 50V Chip C.
xC14	46795300	6800pF 50V Chip C.
xC15	46795500	10000pF 50V Chip C.
xC22	46778100	100pF 50V Chip C.
xFL1	48363600	DOLBY Filter
xFL2	48193300	DOLBY Filter (SQ)
xFL3	48366300	Trap Filter
xVR1	46633700	1kΩ (B) S.V.R., P.B. Level adj.
	or 48199300	1kΩ (B) S.V.R., P.B. Level adj.

6-2. F-4678 Playback Amp. Board (Stock No. 00968801)

Component Side

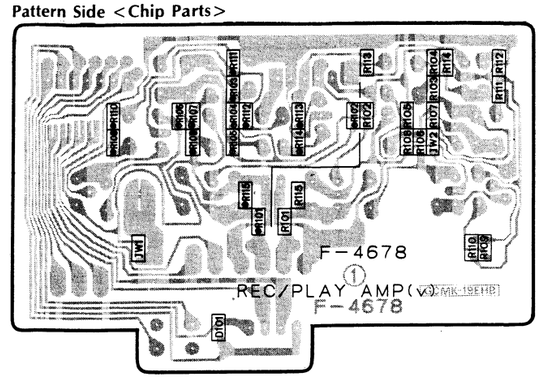


•**Note:** On this circuit board, the right channel is specified by "●" mark on top of the parts No.

Parts List

Parts No.	Stock No.	Description
•Transistor		
vQ101	46359801	2SC2001
	or 48055901	2SD1468S
vQ102	46577801	2SC2320L
	or 46581701	2SC1845
vQ103	46577801	2SC2320L
	or 46581701	2SC1845
	or 46947401	2SC2459
vQ104	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
•Diode		
vD101	46852000	RLS-73 (Chip)
vJW1	46741100	Cross Conductor (Chip)
vJW2	46741100	Cross Conductor (Chip)

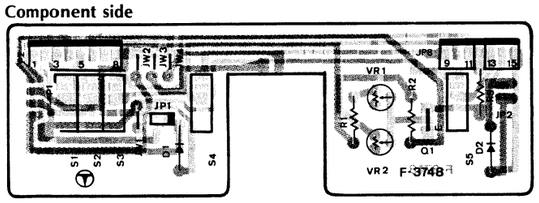
Pattern Side <Chip Parts>



Parts No.	Stock No.	Description
vR101	46742800	10Ω 1/8W Chip R.
vR102	46749200	4.7kΩ 1/8W Chip R.
vR103	46752800	150kΩ 1/8W Chip R.
vR104	46751600	47kΩ 1/8W Chip R.
vR105	46750400	15kΩ 1/8W Chip R.
vR106	46752800	150kΩ 1/8W Chip R.
vR107	46744000	33Ω 1/8W Chip R.
vR108	46747800	1.2kΩ 1/8W Chip R.
vR109	46746800	470Ω 1/8W Chip R.
vR110	46752600	120kΩ 1/8W Chip R.
vR111	46748600	2.7kΩ 1/8W Chip R.
vR112	46747600	1kΩ 1/8W Chip R.
vR113	46750000	10kΩ 1/8W Chip R.
vR114	46753200	220kΩ 1/8W Chip R.
vR115	46752400	100kΩ 1/8W Chip R.
vVR101	48078600	1kΩ S.V.R., P.B. Pre Level adj.
vRL1	11504700	Relay
	or 11504701	Relay LR2A-12B

6-3. F-3748 Tape Selector Board

Component side



Parts No.	Stock No.	Description
•Diode		
tD1	03111600	1S2473
tS1	47292710	Leaf SW., half
tS2	47292710	Leaf SW., REC Prevention
tS3	47292710	Leaf SW., tape sel. HIGH
tS4	47292710	Leaf SW., tape sel. METAL

6-4. F-5331 Photo Coupler Board

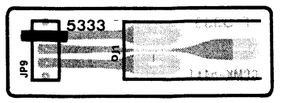
Component Side

Parts List

Parts No.	Stock No.	Description
wPH1	48372500	Photo COUPLER GP2L04-B
	or 48372501	Photo COUPLER GP2L04-C

6-5. F-5333 Phone Jack Board

Component Side

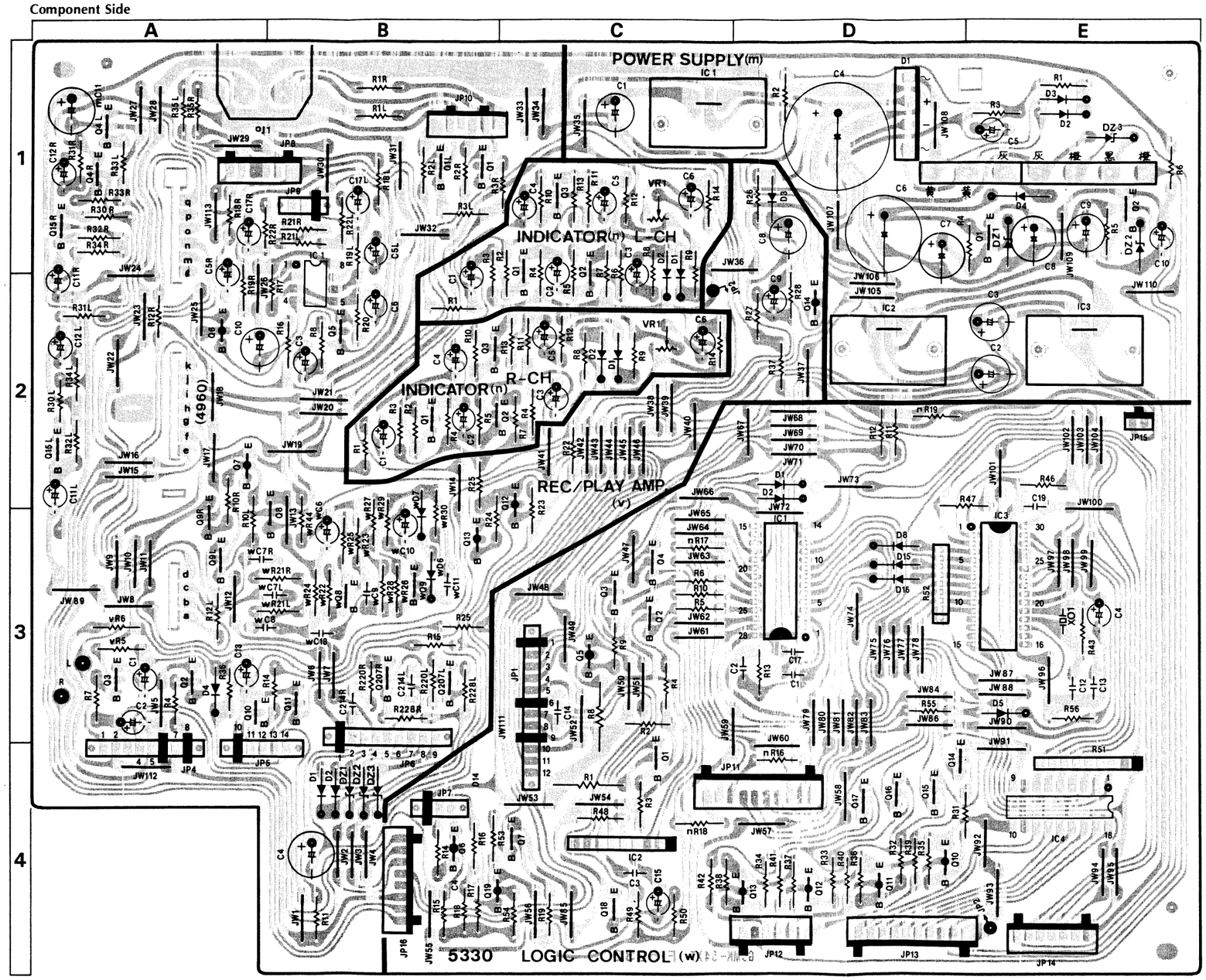


Parts List

Parts No.	Stock No.	Description
oJ2	46265700	Jack, PHONES

6-6. F-5330 Logic Control Board (Stock No. 00968201)

Component Side



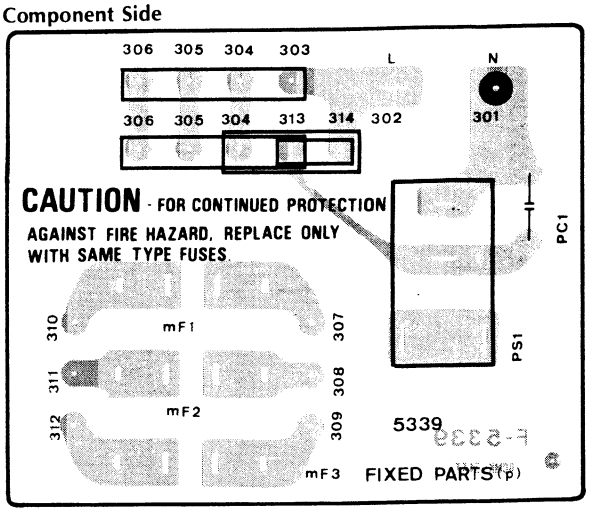
Parts List

Parts No.	Stock No.	Description
•Transistor		
mQ1	03085201	2SD438
mQ2	03085201	2SD438
•IC		
⚠mIC1	46144600	NJM78M12A
⚠mIC2	46144600	NJM78M12A
⚠mIC3	46144200	NJM78M05A
•Diode		
⚠mD1	03117000	RB152-LFF
mD2	03117600	1S2473T77
mD3	03117600	1S2473T77
⚠mD4	03117700	10E-2
•Zener Diode		
mDZ1	46116000	05Z24-Y
mDZ2	46115100	05Z18-Y
mDZ3	46111800	05Z6.2-Y
mC4	46168700	3300μF 35V E.C.
mC6	08405100	470μF 50V E.C.
•Transistor		
nQ1	46367101	2SC2603
nQ2	46367101	2SC2603
nQ3	46367101	2SC2603
•Diode		
nD1	03117600	1S2473T77
nD2	03117600	1S2473T77
nVR1	48199900	100kΩ (B) S.V.R., Level Indicator adj.
oJ1	46371500	4P Terminal, LINE IN, LINE OUT
•Transistor		
vQ1	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ3	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ4	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ5	46719900	DTC124ES
vQ6	46719800	DTA124ES
vQ7	46719800	DTA124ES
vQ8	46719900	DTC124ES
vQ9	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ10	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ11	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ12	46367001	2SA1115
	or 46392001	2SA1175
vQ13	46367001	2SA1115
	or 46392001	2SA1175
vQ14	46367001	2SA1115
	or 46392001	2SA1175
vQ15	46367101	2SC2603
	or 48058801	2SC1740S
vQ207	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
•IC		
vIC1	46673800	M5218P

Parts No.	Stock No.	Description
•Diode		
vD1	03117600	1S2473T77
vD2	03117600	1S2473T77
vD3	03117600	1S2473T77
vD4	03117600	1S2473T77
vD5	03111600	1S2473
•Zener Diode		
vDZ1	46112700	05Z8.2-Y
vDZ2	46112700	05Z8.2-Y
vDZ3	46112700	05Z8.2-Y
vR4	46681300	10Ω 1/4W F.R.
•Transistor		
wQ1	46614101	2SC3243
wQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ3	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ4	46359801	2SC2001
	or 46614101	2SC3243
	or 48055901	2SD1468S
wQ5	46359701	2SA952
	or 46614001	2SA1283
wQ6	46367001	2SA1115
wQ7	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ8	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ9	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
wQ10	46367001	2SA1115
	or 46392001	2SA1175
wQ11	46367001	2SA1115
	or 46392001	2SA1175
wQ12	46367001	2SA1115
	or 46392001	2SA1175
wQ13	46367001	2SA1115
	or 46392001	2SA1175
wQ14	46719900	DTC124ES
wQ15	46719900	DTC124ES
wQ16	46719900	DTC124ES
wQ17	46719900	DTC124ES
wQ18	46367101	2SC2603
	or 48058801	2SC1740S
wQ19	46367001	2SA1115
	or 46392001	2SA1175
•IC		
wIC1	46948000	TC9310N-050
wIC2	46149600	BA6208
wIC3	48370300	M50763-412SP
wIC4	46671500	LB1291
wX01	46396200	Ceramic Element CSB400P
•Diode		
wD1	03117600	1S2473T77
wD2	03117600	1S2473T77
wD5	46421600	OA90M
wD6	03117600	1S2473T77
wD7	03117600	1S2473T77
wD8	03117600	1S2473T77
wD15	03117600	1S2473T77
wD16	03117600	1S2473T77
wR51	46348900	4.7kΩX8 1/8W A.R.
wR52	48339900	4.7kΩX8 A.R.
wC2	46695400	0.012μF 50V F.C.

6-7. F-5339 Power SW. Board

Component Side

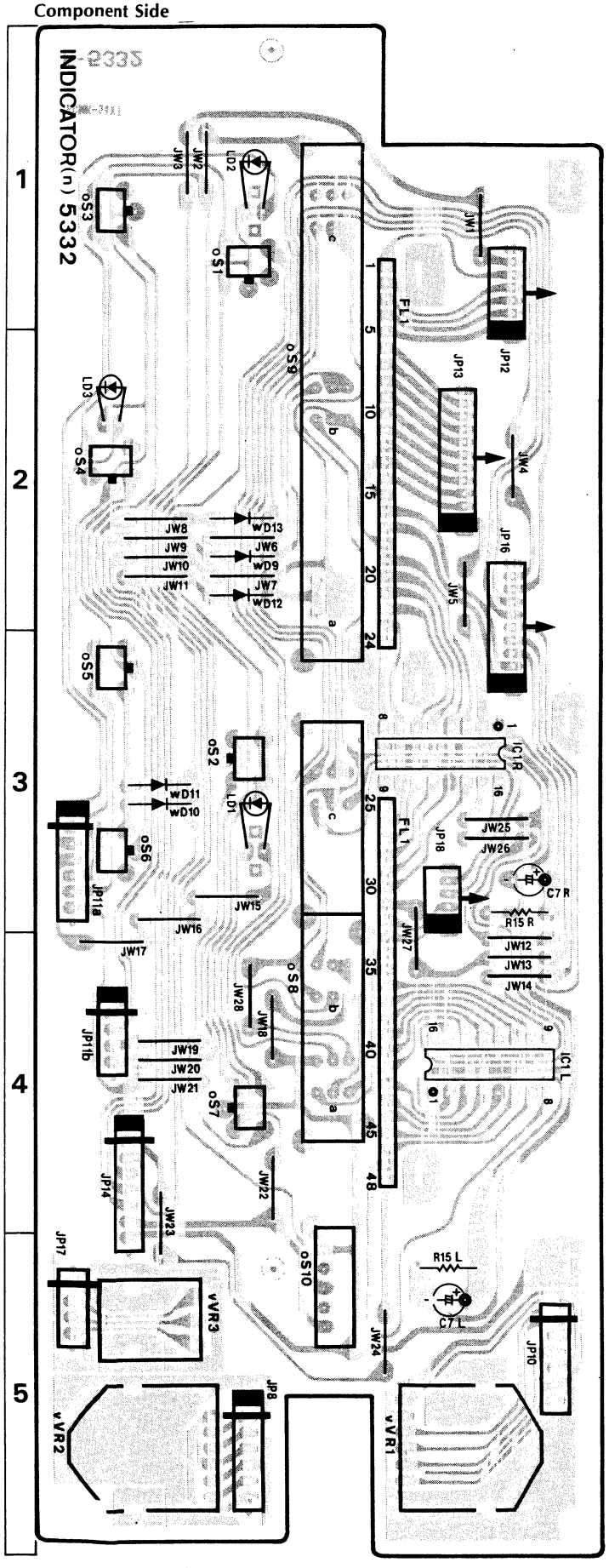


Parts List

Parts No.	Stock No.	Description
⚠pC1	46943200	0.01μF 400V C.C.
⚠pS1	46413900	Push SW., POWER (XX,UL,EU,UK,AS)
⚠	48065200	Push SW., POWER (CSA)

6-8. F-5332 TAPE COUNTER DISPLAY & Control SW. Board (Stock No. 00968501)

Component Side

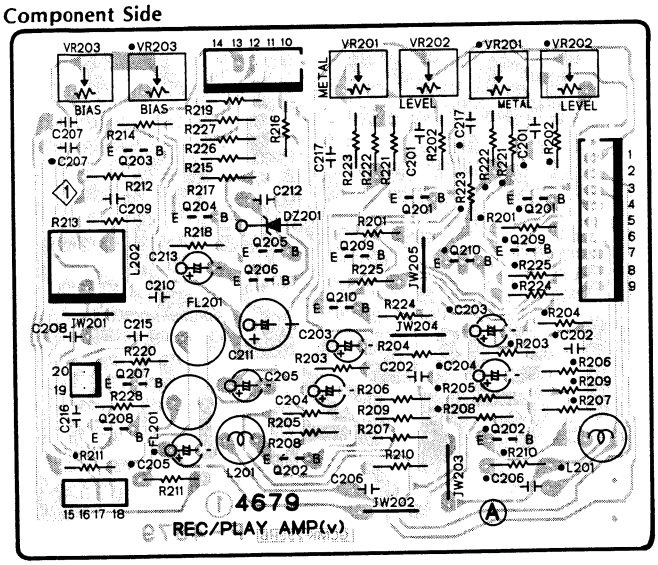


Parts List

Parts No.	Stock No.	Description
•IC		
nIC1	46671100	BA6146
nFL1	48345600	FL. Display Tube CP5262GR
•LED		
nLD1	07250900	TLG-123A, PLAY
nLD2	07251000	TLY-123, PAUSE
nLD3	46176900	TLS-123, REC
nC7	46711800	22μF 25V E.C.
oS1	48306900	Push SW., PAUSE
oS2	48306900	Push SW., PLAY
oS3	48306900	Push SW., REC MUTE
oS4	48306900	Push SW., REC
oS5	48306900	Push SW., REW
oS6	48306900	Push SW., FF
oS7	48306900	Push SW., STOP
oS8	48315900	Push SW., DOLBY NR
oS9	48369900	Push SW., AMPS, MEMORY, RESET
oS10	46178400	Slide SW., TIMER REC/PLAY
vVR1	48493100	10kΩ V.R., REC LEVEL
vVR2	48370200	10kΩ V.R., OUTPUT Level
•Diode		
wD9	03117600	1S2473T77
wD10	03117600	1S2473T77
wD11	03117600	1S2473T77
wD12	03117600	1S2473T77
wD13	03117600	1S2473T77

6-9. F-4679 REC Amp. Board (Stock No. 00968601)

Component Side



•**Note:** On this circuit board, the left channel is specified by "●" mark on top of the parts No.

Parts List

Parts No.	Stock No.	Description
•Transistor		
vQ201	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ202	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ203	46725801	2SC1627A
	or 48061801	2SC3244
vQ204	46614101	2SC3243
vQ205	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ206	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ209	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ210	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
•Zener Diode		
vDZ201	46109300	05Z3.0-X
	or 46109400	05Z3.0-Y
⚠vR214	46681300	10Ω 1/4W F.R.
vC208	46657200	4700pF 100V F.C.
vFL201	48363500	Trap Coil
vL201	48121500	Inductor 2.7mH
vL202	48363710	Bias OSC Coil
vVR201	10354100	47kΩ (B) S.V.R., METAL Rec Level adj.
vVR202	10353900	22kΩ (B) S.V.R., Rec level adj.
vVR203	10354300	100kΩ (B) S.V.R., Bias adj.

7. MAIN PARTS REPLACEMENT (See Exploded View on page 15)

A. Bonnet (See Fig. 7-1)

1) Remove two screws Ⓢa.
2) Pull the rear side of the bonnet and then remove it.

B. Bottom Plate (See Fig. 7-1)

1) Remove four screws Ⓢb, Ⓢc.
2) Pull the rear side of the bottom plate and then remove it.

C. Side Panel L (or R) (See Fig. 7-2)

1) Remove the bonnet and bottom plate.
2) Shift the position of the side panel L (or R) 2.0cm into the arrow direction ①.
3) Undo the hooks ② of the side panel and then pull it to the arrow direction ③ to remove it.

D. F-4678 and F-4679 Circuit Board

1) Remove the bonnet and the bottom plate.
2) Pluck out two connectors from F-4679 circuit board.
3) Pull out two connectors from the F-4678 circuit board.
4) Remove the protection cover on the F-4678 circuit board.
5) Unsolder the read wires of head.
6) Loosen two screws fixing F-4678 circuit board.

Fig. 7-1

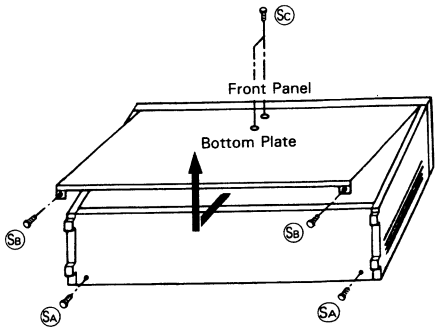
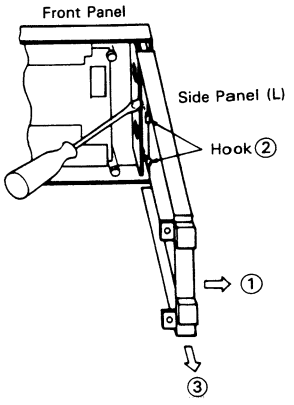


Fig. 7-2



to be continued ►

E. Damper Ass'y

1) Hold the damper holder to fix it, and push the damper ass'y to the arrow direction as Fig. 7-3, so that the damper ass'y is removed from the damper holder. (See Fig. 7-3)
2) Pinch the joint portion of the joint shaft and the damper ass'y, and remove the joint shaft from the groove of the damper holder after a little twist to the left. (See Fig. 7-4)
3) Turn up the damper end, to set the slit of the damper ass'y to the projection of the joint shaft. Then pull out the damper ass'y from the joint shaft. (See Fig. 7-5)

Fig. 7-3

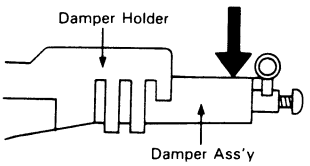
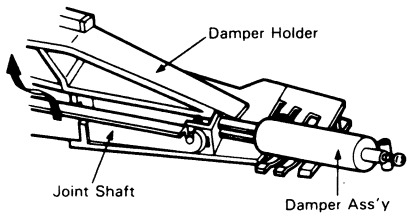


Fig. 7-4

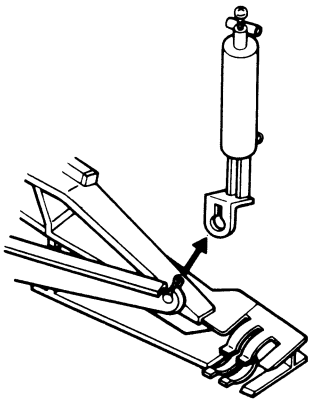


F. Mechanism Ass'y

1) Remove the bonnet, the bottom plate.
2) Remove two screws ⑤ (See Top View on page 16)
3) Pull the tension bar to undo the hooks and then remove it.
4) Pluck out two connectors from F-3748 board.
5) Extract two connectors from the F-4678 circuit board.
6) Disconnect five connectors from the F-4679 circuit board.
7) Remove the damper ass'y.
8) Remve the side panel R.
9) Take off counter belt around reel groove.
10) Loosen four screws to remove mechanism ass'y.
11) Push the " ⏏ " mark to open cassette holder.
12) Take out the mechanism ass'y.

Note: Be careful not to snap cables.
To attach the mechanism ass'y, put the counter belt at the reel groove and push the eject lock lever to the arrow direction as Fig. 7-7.

Fig. 7-5



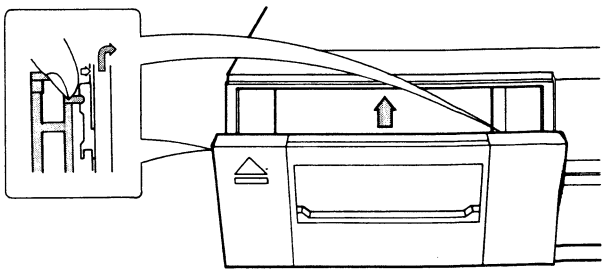
G. Rec/PB Head ⑳

1) Remove the mechanism ass'y from set.
2) Loosen two screws.
3) Unsolder read wires of head at head terminal.

H. Pinch Roller Ass'y ④

1) Remove the mechanism ass'y from set.
2) Pull out the lock pin ③.
3) Take out the pinchroller ass'y.

Fig. 7-6



I. Reel Gear ⑰

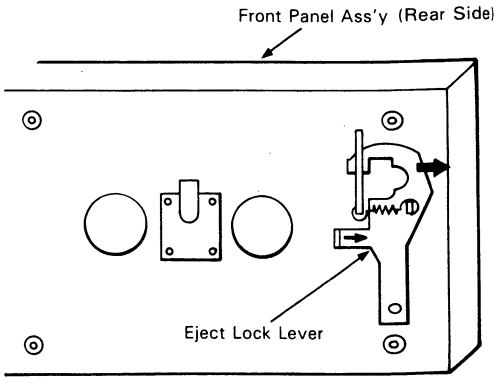
1) Remove the mechanism ass'y from set.
2) Remove the washers ⑮ and ⑯ fastening the reel gear.

J. Capstan Motor ㉛, Reel Motor ㉜, Capstan Belt ㉗, Flywheels ㉘ and Plunger ㊲

1) Remove the mechanism ass'y from set.
2) Remove the boards F-4678 and F-4679 from the mechanism ass'y.
3) Remove the sub-chassis.

* When reassembling these removed parts, take the follwing precaution: Assenbly the push (A) so that these parts are mutually positioned as shown in 3-3 on page 4 and 5.
Unless positioned correctly, the mechanism ass'y may be operated erroneously. Remember that if the push arm (A) is positioned on the assist gear (A), the eject arm may be locked.

Fig. 7-7



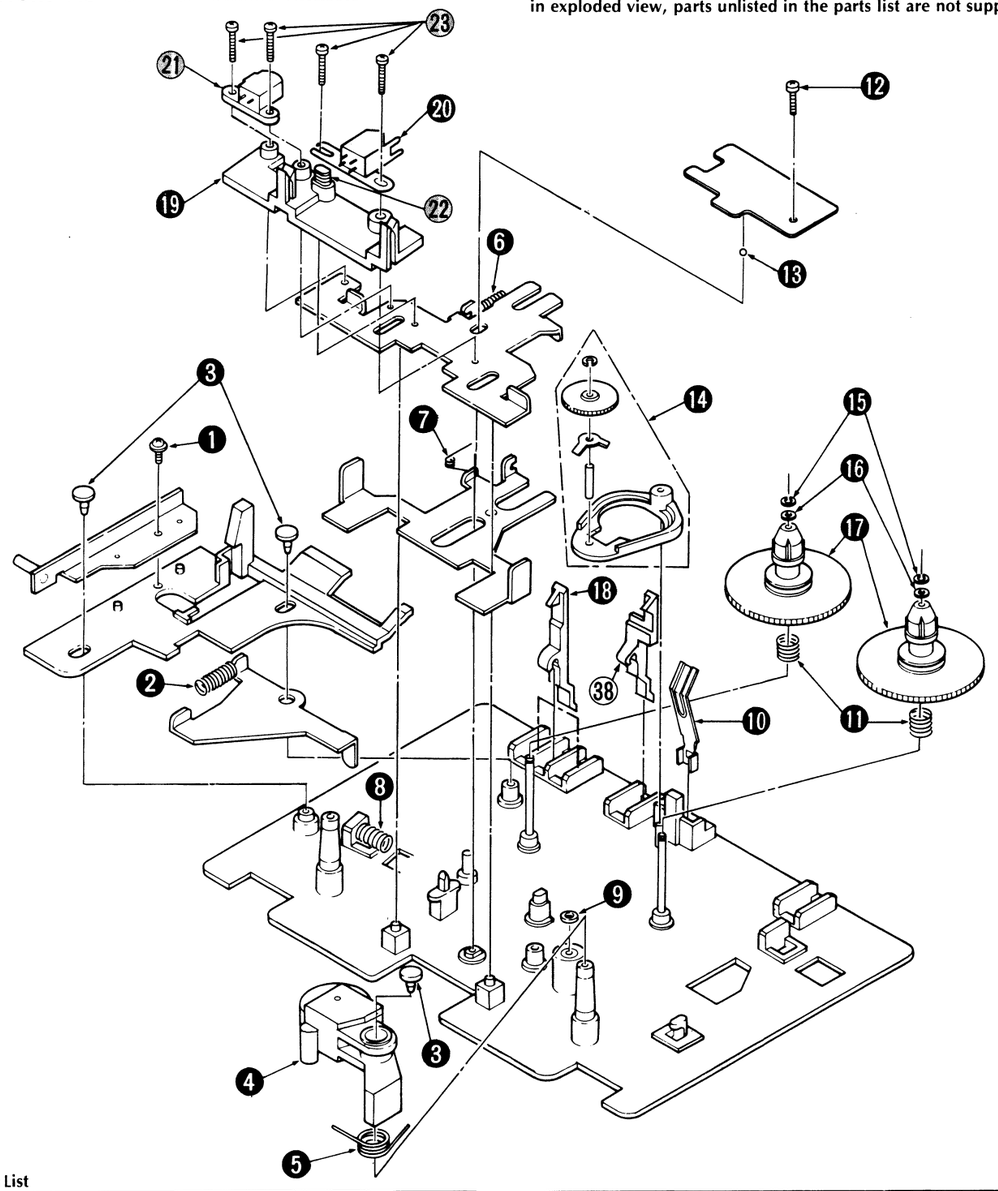
K. Lid Ass'y

Press the " ⏏ " mark to open the cassette holder, push the parts locked at the left and right in Fig. 7-6 while pulling it upward, and remove the lid ass'y.

8. EXPLODED VIEW OF MECHANISM ASS'Y & PARTS LIST

8-1. Front View of Mechanism Chassis

• Though every part included in mechanism ass'y is numbered in exploded view, parts unlisted in the parts list are not supplied.

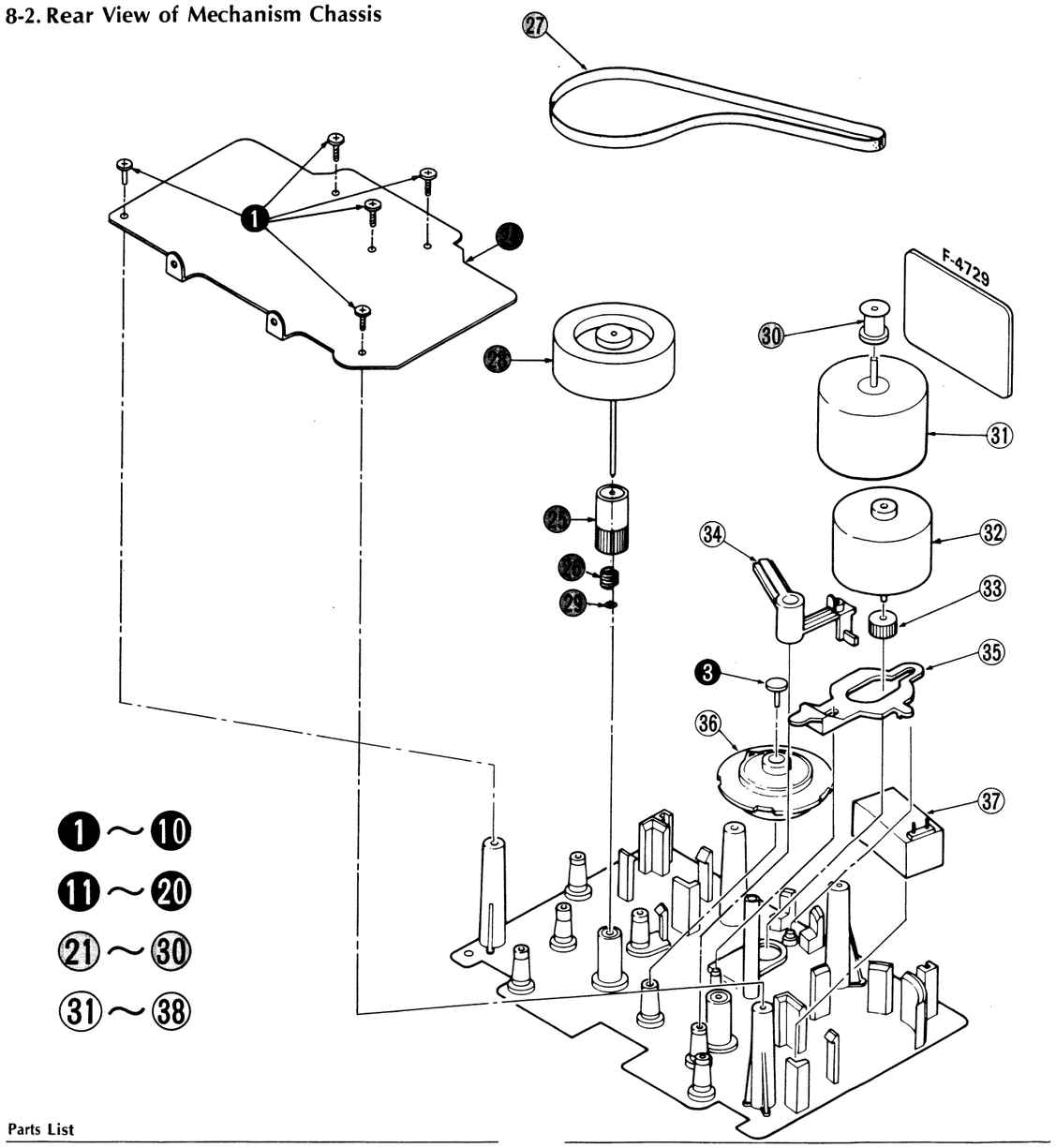


Parts List

Parts No.	Stock No.	Description
1	46267900	Tapping Screw, M3.0X8
2	47644500	Spring, eject
3	47420900	Plastic Tack
4	47281810	Pinch Roller Ass'y
5	47405500	Spring, pinch roller
6	47406200	Spring, head base
7	47405600	Spring, slide base
8	47668600	Spring, plunger solenoid
9	47404700	Washer, d=2.5
10	47839400	Spring, half

Parts No.	Stock No.	Description
11	47709620	Spring, reel
12	18139300	Tapping Screw, M2X12
13	47404900	Steel Ball, ϕ2.0
14	47405000	Arm Ass'y
15	27083100	Washer, d=1.6
16	47497100	Washer, d=2.0
17	47835510	Reel Gear Ass'y
18	47723020	Sensor Arm (A)
19	47284110	Head Base
20	48369400	REC/PB Head

8-2. Rear View of Mechanism Chassis



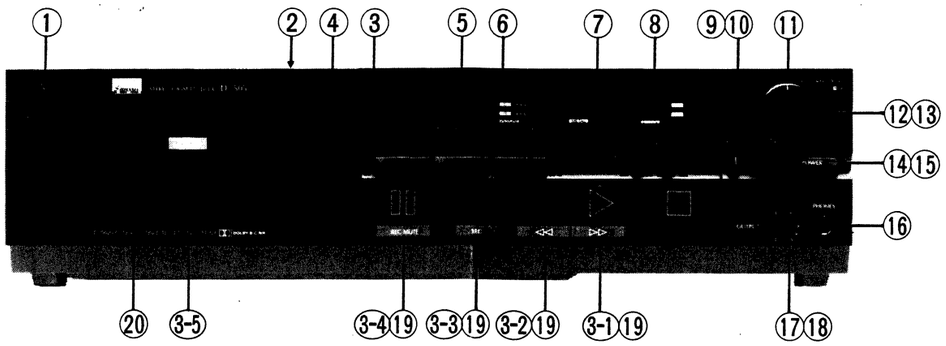
Parts List

Parts No.	Stock No.	Description
21	07997400	Erase
22	47406100	Spring, azimuth
23	00420900	Binding Head Screw, M2X12
24	———	Sub Chassis
25	47281210	Gear, flywheel ass'y
26	47530000	Spring A, flywheel
27	47405100	Belt
28	47282900	Flywheel Ass'y
29	47404600	Washer, d=2.5

Parts No.	Stock No.	Description
30	47283200	Pully
31	46737400	Capstan Motor
32	46737500	Reel Motor
33	47293110	Gear, reel motor
34	47903310	Lock Arm (A)
35	47293810	Arm (B)
36	47283830	Assist Gear
37	47292610	Plunger Solenoid
38	47292530	Sensor Arm B

9. OTHER PARTS

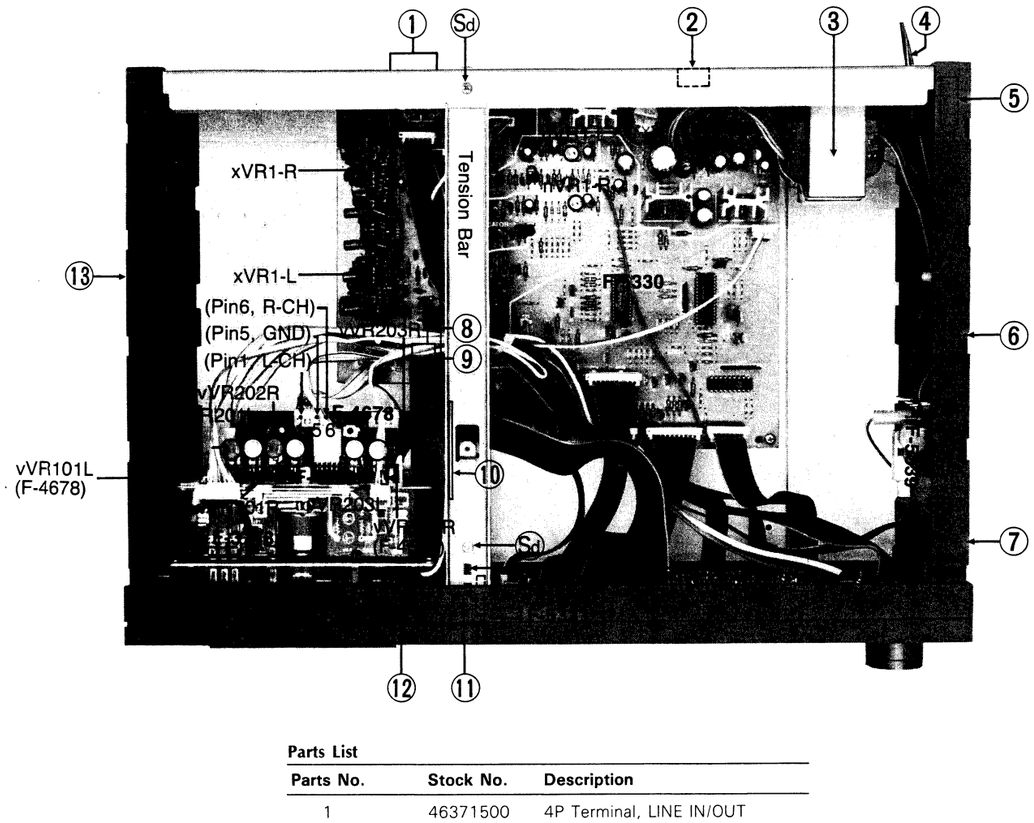
9-1. Front View



Parts List

Parts No.	Stock No.	Description
1	27129200	Lid Ass'y
2	27129800	Bonnet
3	27130200	Front Panel Ass'y
3-1	27133300	Push Knob, FF
3-2	27133400	Push Knob, REW
3-3	27159200	Push Knob, REC
3-4	27133500	Push Knob, REC MUTE
3-5	27128700	Cassette Holder Ass'y
4	48369900	Push SW., AMPS, MEMORY, RESET
5	27150500	Push Knob, AMPS, MEMROY, RESET
6	48345600	FL. Display Tube
7	48315900	Push SW., DOLBY NR
8	27150400	Push Knob, DOLBY NR
9	46178400	Slide SW., TIMER REC/PLAY
10	27127700	Slide Knob, TIMER REC/PLAY
11	27127800	Knob, REC LEVEL (L)
12	27127900	Knob, REC LEVEL (R)
13	48493100	10kΩ V.R., REC LEVEL
⚠14	46413900	Push SW., POWER (XX,UL,EU,UK,AS)
⚠	48065200	Push SW., POWER (CSA)
15	27127600	Push Knob, POWER
16	46265700	Jack, PHONES
17	27128000	Knob, OUTPUT
18	48370200	10kΩ V.R., OUTPUT
19	48306900	Push SW., PAUSE, PLAY, REC, REC MUTE, REW, FF, STOP
20	48389900	LED Ass'y (SLF-401C)

9-2. Top View



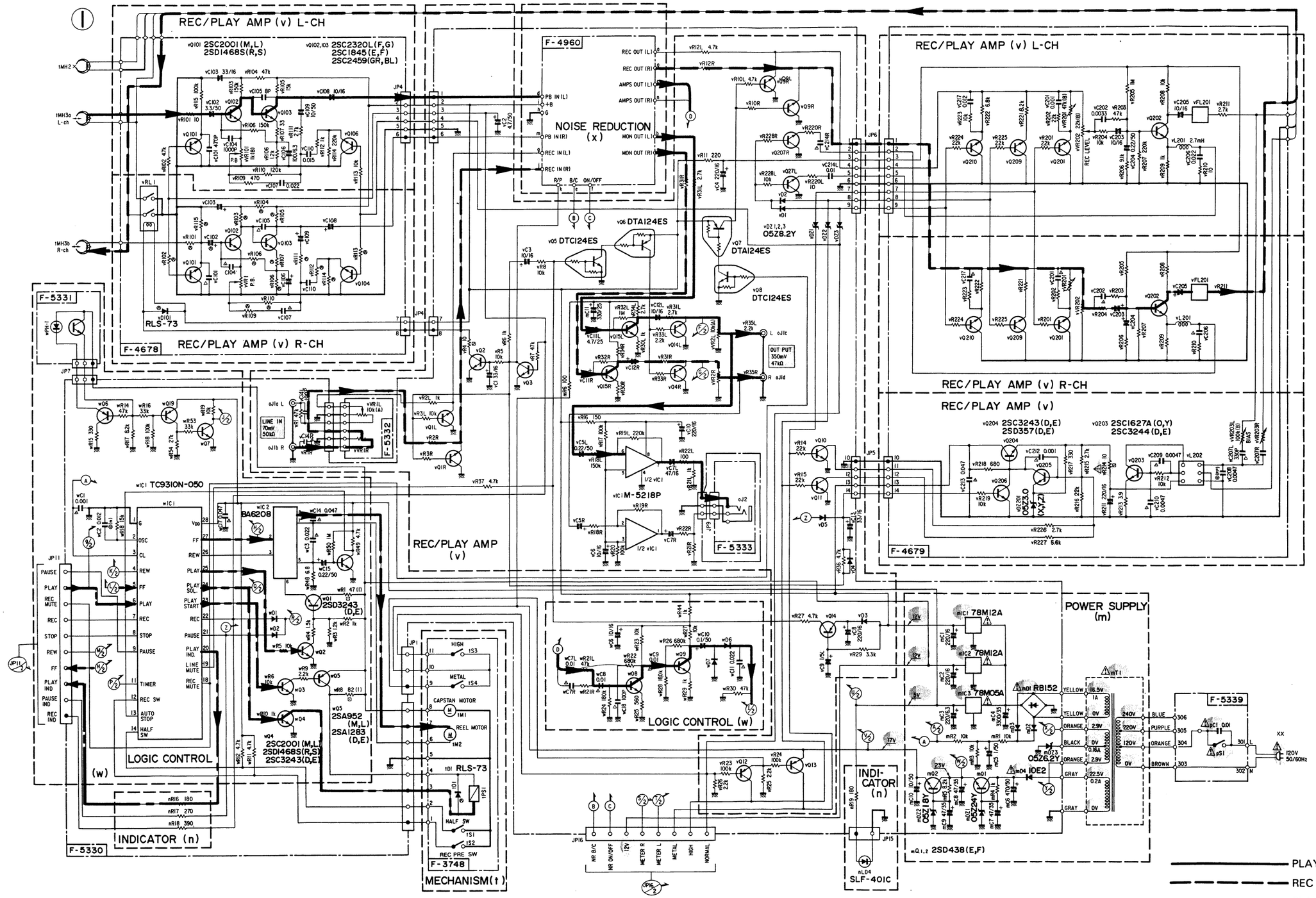
Parts List

Parts No.	Stock No.	Description
1	46371500	4P Terminal, LINE IN/OUT
⚠ 2	07204700	Slide SW., VOLTAGE SELECTOR (EU,UK)
⚠ 3	15024301	Power Transformer (XX)
⚠	15024302	Power Transformer (UL,CSA)
⚠	15024305	Power Transformer (EU,UK,AS)
⚠ 4	38004700	Power Supply Cord (XX,UL,CSA)
⚠	38004500	Power Supply Cord (EU)
⚠	07204200	Power Supply Cord (AS)
⚠	38004300	Power Supply Cord (UK)
5	47157300	AC Cord Cover
6	47679100	Side Panel Ass'y (R)
7	47113110	Joint Shaft
8	48126700	Damper Ass'y
9	47628900	Damper Holder
10	47628500	Damper Joint Shaft
11	27159100	Counter Pulley Ass'y
12	47843300	Counter Belt
13	47608900	Side Panel Ass'y (L)

10. SCHEMATIC DIAGRAM

10-1. Main Section

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten



2SA952 2SA933
2SA1283 2SA1175
2SC1627A 2SC1740S
2SC1845 2SC2785
2SC2001 2SD14685
2SC2320L DTA124ES
2SC3243 DTC124ES
2SD438

BA6208 2SA1115
2SC2458
2SC2459
2SC2603

BA6146
CX20187
LB1291
M5218P
M50763-412SP
TC9310N-050

RLS-73 NJM78M05A
NJM78M12A

RB-152

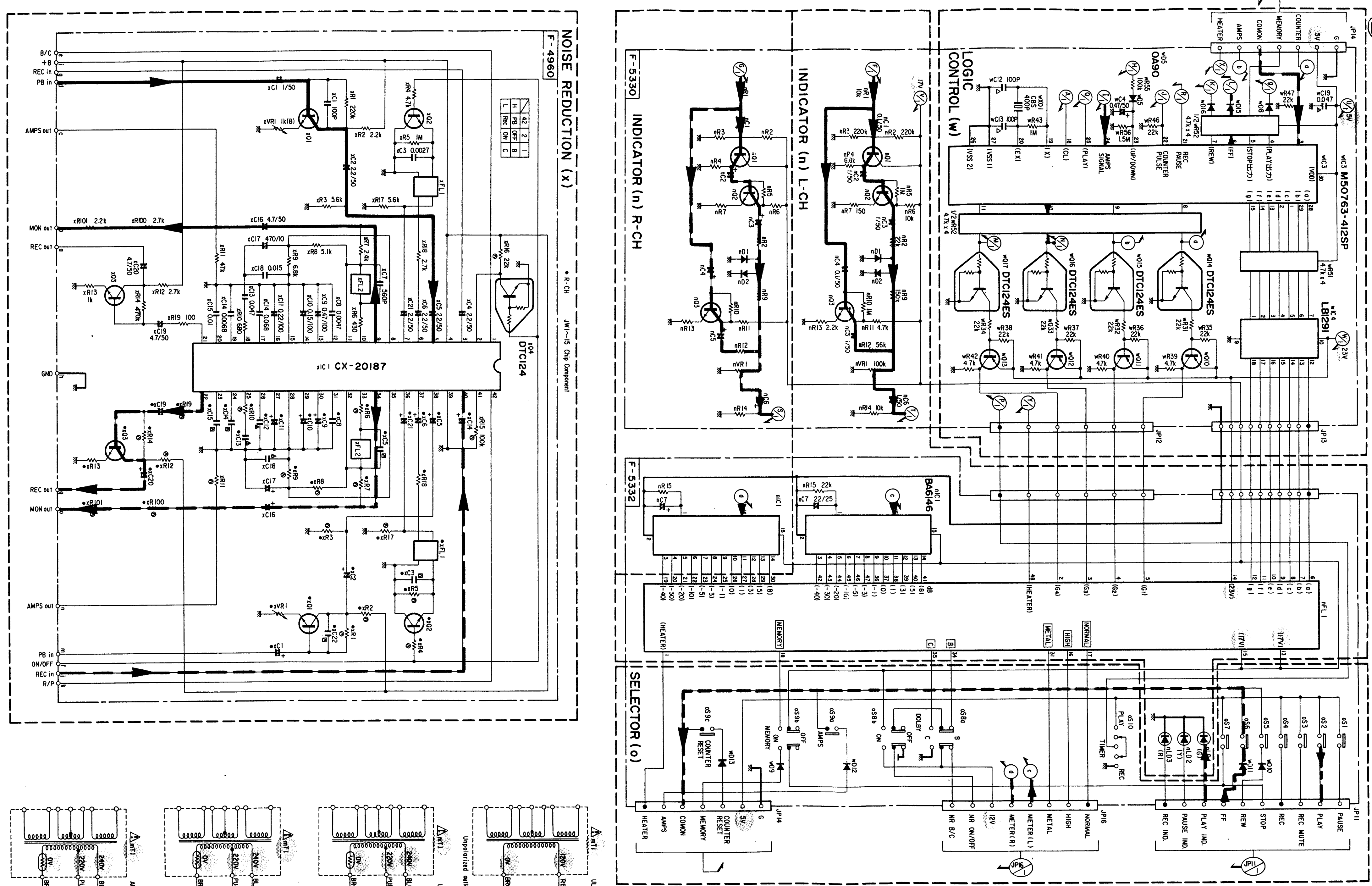
1S1588
1S2473 TLS-123
1OE2 TLS-123A
OA90-M

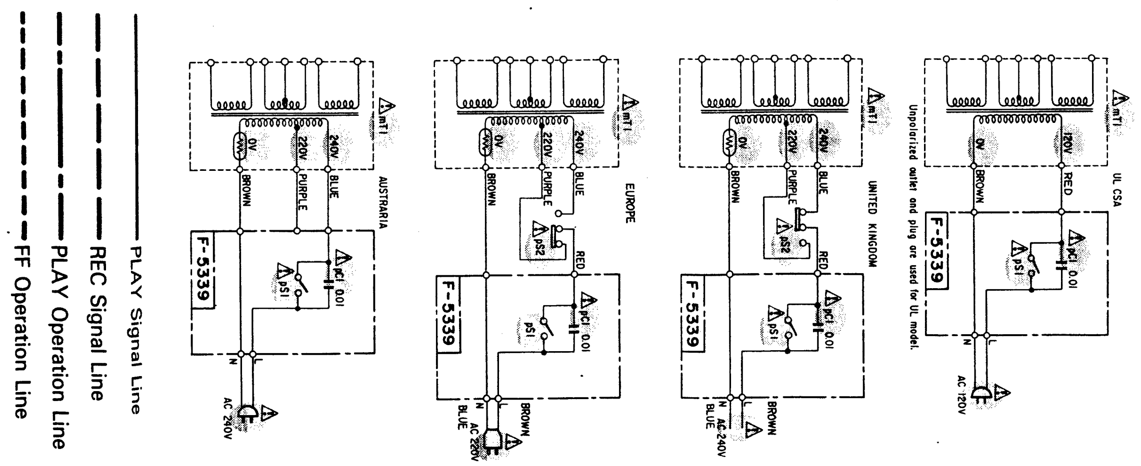
05Z3.0
05Z6.2
05Z8.2
05Z20
05Z24

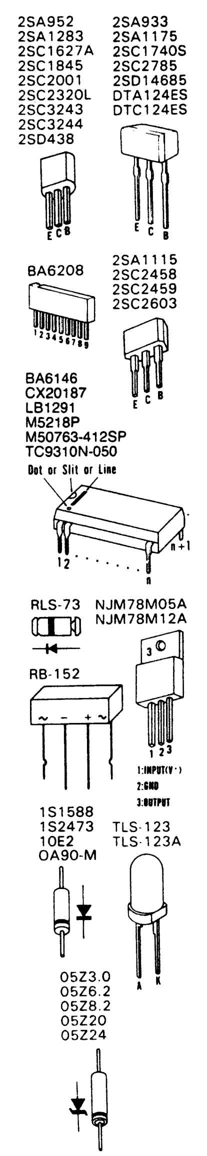
A	B	C	D	E	F	G	H

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

10-2. Display & Noise Reduction Section







SYMBOL OF FUNCTION
(m) POWER SUPPLY
(n) INDICATOR
(o) SELECTOR
(p) FIXED PARTS
(t) MECHANISM
(v) REC/PLAY AMP
(w) LOGIC CONTROL
(x) NOISE REDUCTION

CHIP RESISTORS : Are 1/8 Watts
Each D.C Voltage shows the nominal value in volts during recording

SYMBOL
- Ceramic Capacitor
- Barrier Layer Capacitor
- (m) Mylar Capacitor
- Low-Leak Electrolytic
- B.P Bi-Poler Electrolytic
- Non-inflammable Resistor
- Chip Component (Cylindrical Type)
- Chip Component
- Fusing Resistor
- (PP) Polypropylene Film

RESISTORS
Are in ohms, 1/4 Watts, ± 5% Tolerance
Unless Otherwise Noted, k: kΩ, M: MΩ

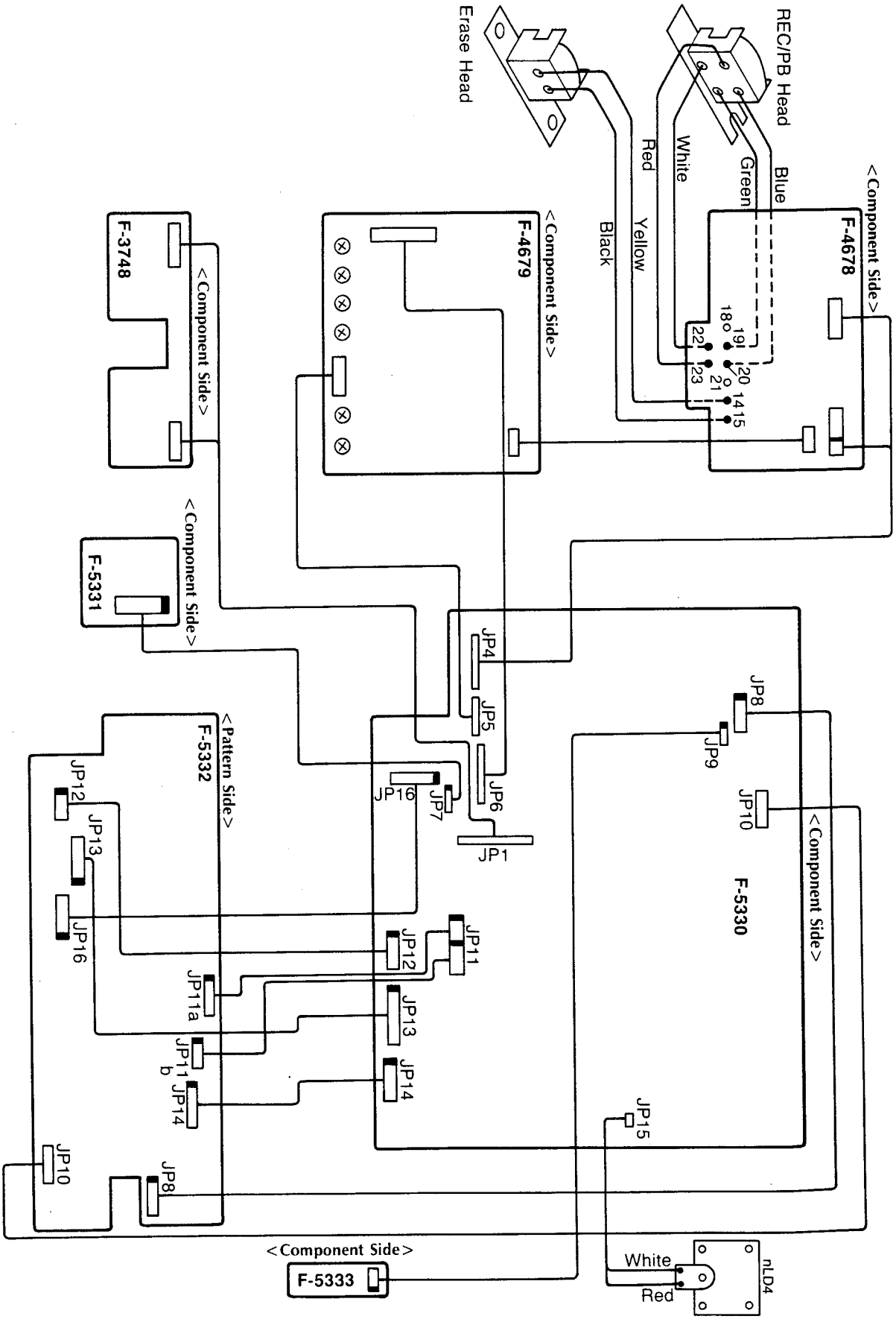
CAPACITORS
Are in μF, Unless Otherwise Noted. P: pF
Electrolytic Capacitor : Capacitance(μF)/Volt(V)

⚠ is Safety part.
Use only replacement part recommended by the manufacturer.

OPTIONAL USE OF SEMICONDUCTOR

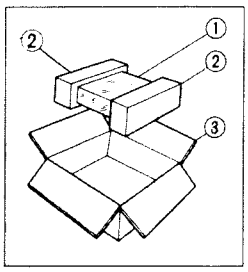
mD2,3 nD1,2 vD1~5 wD1,2,6~13,15,16	1S2473D 1S1588
nQ1~3 vQ1~4,9~11,15 104,201,202 205~207,209,210 xQ1~3 wQ2,3,7~9,18	2SC2603(E,F,G) 2SC1740S(R,S,E) 2SC2458(Y,GR) 2SC2785(J,H,F,E)
vQ12~14 wQ6,10~13,19	2SA1115(E,F) 2SA933S(R,S,E) 2SA1175(J,H,F,E)
nLD1 (G)	TLG-123A GL-3EG7 SEL-2410E
nLD2 (Y)	TLY-123 GL-3HY57 SEL-2910A
nLD3 (R)	TLS-123 GL-3HD7 SEL-2210S

11. WIRING DIAGRAM



12. PACKING LIST

Parts No.	Stock No.	Description
1	47859100	Vinyl Bag
2	27130100	Styrofoam Packing
3	27127500	Carton Case



13. ACCESSORY LIST

Stock No.	Description
07193400	PJP Cord
or 38103300	PJP Cord
46998700	Operating Instruction (*E·F·S)
46998800	Operating Instruction (*G·I·Sw)

*Note:
E·F·S: **E**nglish·**F**rench and **S**panish Version
G·I·Sw: **G**erman·**I**talian and **Sw**edish Version

Sansui

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